

## ■ TOURISM

## To the south of the Black Forest

Trout were the reason we spent our holidays in the Black Forest. We had wanted to go further south, but the trout tasted too good.

We arrived at the Titisee, having stayed overnight in Neustadt. We rested in Hinterzarten on the way, and found a guest house a little distant from the main road. We dined on trout and slept like logs. The following day, we agreed that it would be nice to stay on for a little while longer.

We belong to the kind of people — somewhat of a rarity nowadays — who only use their cars when they want to get somewhere which is beyond the reach of normal healthy legs. When we arrive at a place, the first thing we look for is the sign showing all the best hiking paths. If this is nowhere to be found, we are at once rather sceptical, for then it seems to us that the people there have no real notion of what tourism is all about.

Rarely is this sign missing in any place in the Black Forest. Certainly not in and around Neustadt, which is a health resort with a healthy climate as well as being a Kneipp spa. It is also a winter sports centre of fairly wide appeal.

Neustadt is the kind of place that even gives people who reluctantly leave the comfort of their cars itchy feet. On the very first day, we climbed up the Hochfirst, whose wooded summit, over 3,500 feet above sea level, is crowned by an look-out tower.

The view from the top must be marvellous when the weather is clear. We were



A view of the Titisee

(Photo: Chr. Franz Naeff)

not so lucky, but even through the haze we revelled in a vista that stretched beyond the Titisee to Feldberg and Herzogenhorn. To the north-west, the broad back of the Thurner bounded the view of the Kandel.

Through Saig, a small spa surrounded by woodland and meadows, we descended to the Titisee. This is where to go for winter sports. The hills around Saig are sunny and buried beneath a thick carpet of snow all winter.

Another great advantage is that it is never very crowded here. In winter, any number of hills can be chosen on which to ski in solitude or small groups. The terrible hub-bub and tiringly eager energies of the popular skiing centres seem like a bad dream from the previous winter.

Even for non-skiers Neustadt and the surrounding area offer a wide range of

pleasant dots on every map of the Black Forest, and inevitable destinations for every southern tour of this fine landscape.

These places really are worth a visit. A section of both summits can be reached by mountain lift, and the view from the top is very fine indeed. In clear weather, one can see as far as the Alps and the Vosges.

I would even say that the summit of the Feldberg, the highest in the Black Forest, had its own glacier in the ice age. But I am real love with the region around St. Blasien and St. Peter, on the other, northern side of the valley.

These small high-altitude health resorts — 2,500 or 2,600 feet high — present a gentle pattern of meadow and woods. The hills are not very steep, and these marvellous tang in the air. It is so relaxing that one hardly notices the distance.

Here people really hike. Few can be seen on the roads crisscrossing the valley. Both towns grew up around medieval monasteries.

The region around Märgen had been settled in Celtic times, judging by excavations.

The churches have rich baroque interiors. Their steeples overlook villages clean, often very modern guest houses and farm houses, many of which cater to tourists.

The wine slopes of the lower Glotter are not extensive, but the local wine is a treat, even for connoisseurs. St. Blasien is one of the finest monastic libraries in the south. Along with the church, it was planned and built by the famous Völklinger master, Peter Thun.

(STUTTGARTER ZEITUNG, 22 May 1969)

## Frankfurter Allgemeine

ZEITUNG FÜR DEUTSCHLAND

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## The German Tribune

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A WEEKLY REVIEW OF THE GERMAN PRESS

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## Fraternal delegates not so fraternal at Moscow

Frankfurter Rundschau  
Frankfurt am Main

Assurances given by the Soviet Union and its most faithful henchmen to the effect that the Moscow summit of Communist Parties would not be considered a convenient opportunity to pass judgment on comrades in Peking were a sine qua non for the holding of the Communist summit.

Yet hardly had delegates assembled in the Kremlin but First Secretaries Gomulka of Poland and Waldeck Rochet of France fired their first broadsides at Peking.

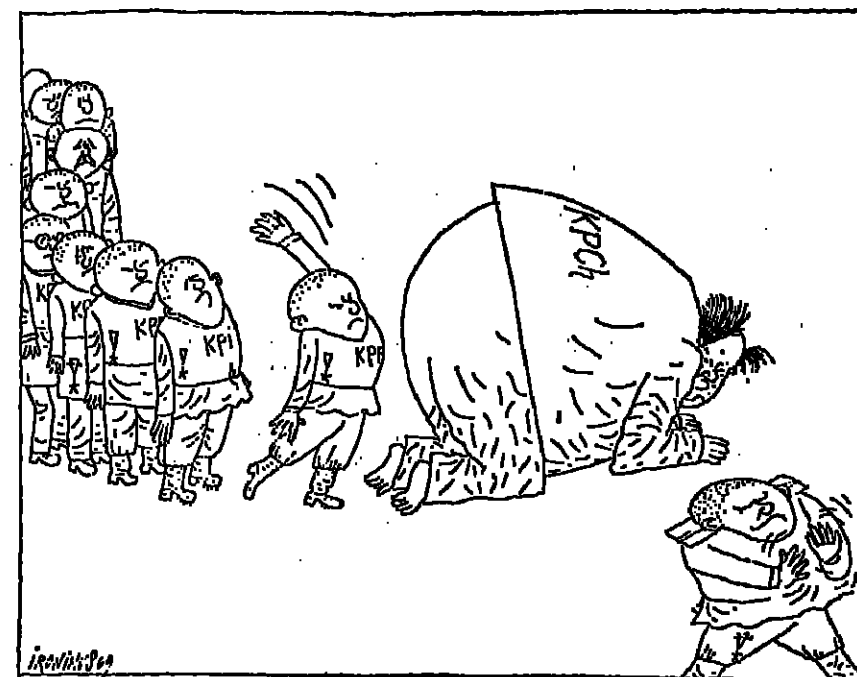
These attacks were so virulent that Rumanian party leader Nicolae Ceausescu felt obliged to make reference to the obligations that had been generally accepted during preparations for the conference.

It had been agreed that no one should have the right to attack a fraternal party not represented at the Moscow gathering. First Secretary Ceausescu warned of the possible consequences of breaking this agreement.

Pravda was first to reveal what the Soviet Union really held of the undertaking in reprinting the anti-Chinese outpourings but not the Rumanian leader's warnings. An important preliminary decision had thus already been taken. Leonid Brezhnev followed this up by dotting his speech with restrained attacks on the Maoists.

According to First Secretary Brezhnev the Chinese are entirely to blame for the struggle against imperialism not being fought along the lines decreed by Moscow. These he maintained were solely valid.

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The slap-happy conference!

(Cartoon: Ironimus/Süddeutsche Zeitung)

press for brave Red Army soldiers who allegedly performed a grand job in frontier incidents the Soviet Foreign Ministry officially declared that "The Soviet-Chinese frontier is completely peaceful."

Had Moscow assumed that it had shaken off irksome Chinese critics in this way, it was soon to be proved mistaken. On the second day of the conference Mao's propagandists brought up their heaviest armour yet to proclaim to the world that the Soviet union is "an enormous fascist gaul."

Mr Brezhnev can hardly leave an insult

of this gravity unanswered. He has to answer and could well change the nature of the conference into the trial in absence of the Chinese that he originally intended.

The resulting danger for Kromlin ideologists is unforeseeable, provided Mao adopts skilful tactics and does not overbid. Leonid Brezhnev stands a good chance of going down in the history of world Communism as the man who completed the schism.

Martin Schulze

(Frankfurter Rundschau, 9 June 1969)

## Chinese bedevil communist conference

to wash down the irksome Czech question.

Yet these explanations are hardly sufficient to explain First Secretary Brezhnev's specific accusations. As the accusations can hardly have been spontaneous the Soviet Union must, it can only be presumed, be at bottom deeply concerned about the attitude of the emerging third world power.

Moscow's strategic world outlook seems to have undergone a fundamental change. The West, which Moscow has covered by a missile shield anyway, is no longer considered to be the likely starting-point of an attempt to alter the status quo.

The threat is felt first and foremost to come from Red China, which is beginning to become something of a strain both with its revolutionised ideology and with its comprehensive territorial claims on the Asian part of the Soviet Union.

This vision of the future was painted in glaring colours. Confronting the danger of China is presumably also intended to reduce disharmony in the communist camp, provide the foundation for a new feeling of defensive togetherness and help

irritating. The Soviet leaders must have taken account of this reappraisal of their national interests in contingency planning for some time.

The transfer of Soviet divisions to the eastern frontiers form as much a part of this consideration as does Mr Brezhnev's frank speech, which leads one to assume that the Kremlin might be on the point of a fundamental foreign policy reorientation.

This possible about-turn could hardly suit anyone better than the Federal government. The change would perceptibly relieve the strain on relations between Bonn and Moscow, which have been strained almost to breaking-point in recent years.

A fresh start could be made. Any undertaking of this kind would, admittedly, labour under the heavy burden of mutual mistrust.

The situation will grow clearer this autumn. It will then be clear whether Leonid Brezhnev's 7 June speech was intended to mark a turning-point or first and foremost to chloroform the communist summit. There are a number of indications that the former is the case. Bonn must keep its eyes and ears open.

Robert Schmelzer

(Frankfurter Neue Presse, 9 June 1969)

## FOREIGN AFFAIRS

## Nato's military competence in grave doubt

North Atlantic conferences in Brussels and London a few weeks ago must be viewed as one meeting. The Brussels gathering of Nato Defence Ministers, although intended as a routine discussion, developed into a dramatic confrontation with reality. No doubts remained as to what would happen if military action continues not to be taken.

The military weakness of the alliance is not only evident against the background of Soviet superiority in conventional troop strength. The West has even reached the point at which its active troop strength no longer possesses any deterrent value whatsoever.

All the time Nato has refused to look this fact in the face. Via their Defence Secretaries the last two American Pres-

to deterrent claims that could not be taken seriously at all if the cornerstone of the concept, adequate conventional military presence, were to be scuttled by American troop withdrawals.

Flexible response means providing an appropriate military response to enemy attack. The disadvantage of graduated deterrence, readiness to countenance partial destruction of North Atlantic territory, is to be offset by the continual threat of nuclear war to which Nato is, in the final analysis, prepared to resort in self-defence.

This military house of cards is bound to collapse if the response of Western divisions is not credible because Nato's active troop strength is insufficient to hold back an enemy attack.

The alliance is not sufficiently flexible in military terms to retaliate with a nuclear strike at the drop of a hat everywhere where it stands to lose in conventional engagements.

The automatic strike potential of the major nuclear carrier, the bomber fleets has been largely dismantled. Many Western aircraft, including Luftwaffe planes, have been ordered to be converted for conventional armament and discussion whether or not this has any point has taken place in public.

That more divisions were not mobilised

to offset the consequent weakening of Western defence potential is only one of the side-issues of the key security problem, which is when and how fast a political decision to use nuclear weapons can be put into military effect.

Representatives of seven Nato countries meeting in London exchanged views on the timing and command system of the use of nuclear weapons. The Defence Ministers were in a position to assume that the West's nuclear defences, unlike conventional strength, are adequate. It was also clear that nuclear weapons would not be kept in cold storage.

In London, however, account was taken for the first time of the reality of conventional inferiority. It was not disputed that the Soviet Union's conventional superiority could make necessary theoretical defence planning involving an initial nuclear strike by the West. This would, for instance, have to be the case if a Nato country were threatened to be overrun by Red divisions.

A nuclear strategy based on this prospect could only be understood as a warning. Tactical nuclear weapons would have to be exploded above the sea or dropped by bomber over deserted areas. It would be intended as a sign that escalation must be stopped.

An alliance can hardly be expected to

## Slow erosion of the Czech will to introduce reforms

It cannot be all too long now before the final episode in Czechoslovakia's present suffering, the dismissal of First Secretary Husak, occurs. The introduction to this last stanza has already been written and the conclusion will probably be drafted at the fourteenth congress of the Czechoslovak Communist Party, scheduled by the central committee to be held next year.

Why is another year to be allowed to elapse? Are orthodox Communists in Czechoslovakia still not sure of their positions? Hardly, but they do not want to be overhasty. Each move is to be made independently of the previous one, with an interval between the two so that the

reaction is less ferocious than if the entire process of normalisation were to be imposed at one fell swoop.

Keeping in step with Moscow is being practised, with instructions from above, in carefully separate stages. At Moscow's behest the process of undermining Mr Dubcek's policies was set in motion in the first few months of this year and brought to a successful, incident-free conclusion at Easter.

Purges are now the order of the day. They too are being introduced step by step in order, as in all previous cases, to preclude completely the risk of popular uprising. Frantisek Kriegel, once-acclaimed chairman of the National Front, and Ota Sik, of whom the general public expected an economic about-turn in the direction of humanitarian socialism to follow the political change, are the first two leading public figures to be sacked from the central committee.

They are not intended as a deterrent. They are merely the first of a long series of sackings that will end with the political demise of Alexander Dubcek and Smrkovsky. But it has not yet come to this pass because the new Prague leadership, with Lubomir Strougal as eminence grise is proceeding one step at a time.

This relative caution has also probably been ordered by the Kremlin. And if the Soviet Union is wise — and why should it not be? — it will continue according to this strategy even after the international Communist summit. It is working quite satisfactorily.

(STUTTGARTER ZEITUNG, 3 June 1969)

## Rumanian deputy foreign minister on a 'private visit'

Gheorghe Macovescu, Rumania's Deputy Foreign Minister, who is at present on a visit to this country, is not the top dog and his visit is officially a private one.

This has not stopped Mr Macovescu from calling on a number of politicians who occupy government positions, Finance Minister Franz Josef Strauss, for instance, Agriculture Minister Hermann Höcherl, Secretary of State Georg Ferdinand Duckwitz and now Foreign Secretary Willy Brandt.

Contacts of this kind, which have only been possible (and have certainly been practised) since the establishment of diplomatic relations early in 1967, are

intended to foster an easy atmosphere in relations between this country and the first Eastern Bloc state with which Bonn enjoys full diplomatic relations.

Both sides have learnt from experience that it is far from easy to find the golden mean from which it is often so tempting to depart for reasons that are both sensible and above board: because, for instance, economic possibilities remain to be exploited or progress towards a European peace settlement is desired.

Both sides must take care, though, and both are agreed on the need, even though their reasons may differ.

(Frankfurter Allgemeine Zeitung für Deutschland, 5 June 1969)

agree completely to changes in defence strategy in the course of a few meetings. The sessions of the nuclear planning group are, moreover, bound for some time to come to remain psychological withdrawal engagements as far as the leading nuclear member is concerned.

For Nato countries on the edge of the Iron Curtain, however, present planning is unsatisfactory as long as well-equipped Eastern Bloc armies kept in trim by continual manoeuvres remain in the front of a nuclear power.

Adelbert Weisstein  
(Frankfurter Allgemeine Zeitung, für Deutschland, 4 June 1969)

## Varieties of communist dogma

There is only one Red Bible, & teachings of Marxism-Leninism, but more and more interpreters of the Word are coming forward. Under pressure from various quarters, depending on their geographical location, their interpretation of many tenets can hardly be to Moscow liking.

Only a superficial injunction can be placed on heresy at the international communist summit in Moscow. The Kremlin will emphasise the allegedly increased aggressiveness of imperialism in order to overrule opposite views at the slogan "close ranks in the event of danger."

The only aim common to all delegates is the desire not to create too great an impression of disorder in the eyes of the West. That would be a bad advertisement for communist policies as a whole.

The great unknown factor is whether or not a smaller delegation will make play with the subject of China in the course of the conference. Yet even so, the international conference arranged so doggedly by the Kremlin represents a prestige gain which Moscow would like to amplify as much as possible.

(Münchener Merkur, 4 June 1969)

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PUBLISHER:  
Friedrich Reincke  
EDITOR-IN-CHIEF:  
Eberhard Wagner  
ASSISTANT EDITOR-IN-CHIEF:  
Otto Heinz  
ENGLISH LANGUAGE SUB-EDITOR:  
Geoffrey Penny  
GENERAL MANAGER:  
Heinz Reincke  
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## HOME AFFAIRS

## Grand Coalition rifts papered over

A GOVERNMENT OF AVOIDING THE ISSUES

Cracks in the Grand Coalition have been papered over, again. Sensation-hungry pundits who forecast an abrupt rift have been proved mistaken. This can only come as a surprise to someone who is unaware of the interests of the two coalition parties.

It is equally obvious that the Grand Coalition has not been revitalised. Its leading members, significantly enough once again excluding Franz Josef Strauss, debated until the early hours of 4 June. Much was discussed, little decided.

This is the way it will be until the end of the present legislative period this autumn. It would be harbouring an illusion still to believe in the major reform effort. The Christian and Social Democrats are not only coalition partners but also election campaign competitors.

Justified criticism and understandable dissatisfaction should not, however, be allowed to conceal the fact that a sensible decision was reached on the issue that was formally the subject under discussion, Cambodia's recognition of East Berlin.

Ties are to be frozen, not broken off. A tardy example is not to be set. Together with the Federal government's

STUTTGARTER  
ZEITUNG

policy statement of the end of May this means that the Hallstein Doctrine in its established form has been quietly buried.

Since a demonstration of power is of use only when it works and as there are, both in the Middle and Far East, a number of countries who have a vital interest in both Bonn's aid and Moscow's goodwill, this country has saved itself from making a fool of itself.

Shackles that have long acted as a brake on diplomatic moves have been discarded. Bonn can now decide on its own diplomatic battlefield for engagements with East Berlin and no longer has to give battle on barren terrain.

The way matters have developed there remains the question as to who has emerged victorious from the trial of strength on the home front relations with Cambodia were unnecessarily made into. An objective judgment is far from easy to make.

If, on the other hand, it is borne in mind that Chancellor Kiesinger and a fair number of Christian Democrats were basically in favour of breaking off diplomatic relations completely the Social Democrats can be said to have won a close points decision.

This is understandable enough. The Social Democrats had their backs to the wall. They could not let another defeat such as the one they had sustained over revaluation pass. Whatever view is held on the rectitude of not revaluing the Mark, the decision taken was politically to the advantage of the Christian Democrats.

Professor Schiller as vote-winner for the Social Democrats has lost a little of



Frosty outlook for the Grand Coalition!  
(Cartoon: STUTTGARTER ZEITUNG)

his attraction. Had Willy Brandt too given in and laid himself open to accusations of being a paper tiger, the Social Democrats need not seriously have contested the Bundestag elections.

To this extent, then, both the Cambodia and the revaluation issues are characteristic of the way in which political decisions can be expected to be taken in the weeks and months to come. Or not taken, as the case may be.

So far the rule of thumb has been that the party responsible for toppling the coalition would lose the election without a doubt. Basically, this principle still holds good. The Christian and Social Democrats are, unless they are prepared

to take a considerable risk, condemned to staying together until 28 September and election day.

Alterations must, however, be made to minor details of this tenet. After two trials of strength situations are conceivable in which quitting the coalition would be the lesser of two evils for both the Christian and the Social Democrats — if, for instance, one party were to want to impose a decision on the other that the other could not but lose face by accepting.

Two factors, then, but both point in the same direction. The coalition parties may fight it out tooth and nail cross-country but in the Bundestag and the

## The dubious future of the FDP

Will the jubilation of last March be repeated in the general election this autumn? The election of Gustav Heinemann as Federal President with the aid of Free Democratic (FDP) support was a great moment for the Social Democrats (SPD), who had thus returned a Social Democratic head of state for the first time in 44 years.

It was also a great moment for the FDP, which jumped over the shadow of its own past to a man in voting for the left-winger. The party that reckons to aim at doing away with things that are old hat had begun by making a thorough reappraisal of its own role and outlook.

Since the formation of the Bonn Grand Coalition of Christian and Social Democrats two and a half years ago the FDP has trekked to the left of the political scene in the conviction that the days of conservative Christian Democracy were numbered.

The men who toppled Erhard went on to vote for Helmut Schmidt. They obviously hoped that they and a few reinforcements would this autumn be in a position to vote in a Chancellor other than Dr Kiesinger to the advantage of the Christian Democrats.

Professor Schiller as vote-winner for the Social Democrats has lost a little of

make their showpiece, Economic Affairs Minister Karl Schiller, come a cropper over revaluation of the Mark. At one stage the FDP even dreamt of Schiller resigning and making the way clear for July elections.

Meanwhile a growing number of personalities in Bonn are forecasting a continuation of the Grand Coalition. If the National Democrats (NPD) scale the five-per-cent hurdle and enter the Bundestag coalition possibilities will in any case be limited.

If the NPD does not make it the only other possibility would be if the CDU/CSU were to register a net loss of twenty seats. The FDP can no longer trudge back to the right wing of the political stage. That would mean the end of the party.

North Rhine-Westphalia is the key to electoral success. Both the SPD and the FDP are banking on this region, particularly the Ruhr. If success eludes them the Free Democrats will have to sit on the hard Opposition benches for another four years.

The FDP would then have to fight for its life, for the longer the Grand Coalition lasts, the greater is the danger of plans for majority constituency voting being reactivated. This, again, would mean the end of the FDP as a national political party.

Cabinet caution is advisable in the generation of conflicts.

The tendency to exclude and postpone problems until after the elections will increase, whether the issues involved are the non-proliferation treaty or the statute of limitations, workers' participation in management or sickness benefits.

The two parties will fight Homeric battles of words and try to score tactical victories but take good care to ensure that the other side does not sustain a knock-out. Which does not necessarily mean that agreement, compromise or a bargain will not be arranged on one or other of the points discussed at the recent all-night session.

One or other of these alternatives is most likely on issues on which, in certain circumstances, one coalition party could possibly gain a Bundestag majority in conjunction with a part of the other or with the Opposition.

But whenever the chips are down the side that need only say "no" to gain its own way will be in the advantage, just as the Christian Democrats needed only to say "no" to revaluation and the Social Democrats "no" to breaking off diplomatic relations with Cambodia.

Every sober thinker must realise who stands to gain most from this situation. Recently there has been a great deal of talk about how it has again become noticeable how much stronger the feeling for exercising power is in a conservative party. This is probably true but the crucial point is that whereas the Christian Democrats can largely be satisfied if the status quo remains, the Social Democrats need change and changes to justify their entering into a coalition with the Christian Democrats.

In this respect they will not be harbouring many illusions about prospects in the months to come. The Social Democrats' only, limited chance is that the electorate will feel it needs a change.

Rainer Tross

(STUTTGARTER ZEITUNG, 4 June 1969)

NRZ NEUERUHR ZEITUNG  
Unabhängige Tageszeitung

ed of treasonable contacts with agents of the East Berlin Ministry of State Security, could not have come at a more inopportune moment for the Free Democratic leaders.

The FDP will no doubt emerge from the trial unscathed but it could suffer somewhat in the elections, particularly in Bavaria, where the Christian Social Union, party of Franz Josef Strauss, is riding on the crest of an extreme right-wing wave.

The SPD also have their worries now that the CDU/CSU have been able to

Arnold Gehlen  
(NEUERUHR ZEITUNG, 31 May 1969)



## JUSTICE

## Courtroom procedures in need of reform

LAWYERS AND JOURNALISTS SPEAK FOR THE DEFENDANT

On closer examination of the subject no one is going to claim that the style of court proceedings in this country is altogether up to the minute. The judge sits at a higher level than the prosecuting counsel, counsel sits at a higher level than the man in the dock.

The defendant generally has to stand up before saying anything and has to make do with being addressed as "the accused" rather than by his real name. When the judge enters or witnesses are sworn in the whole court must stand.

The entire ritual, to which many more details could be added, is almost a matter of course for anyone in court. The Extraparlimentary Opposition (APO) are the people who have called all this into question, the general public feel, and they also feel that the APO as a group want to turn everything topsy-turvy.

A different tale was told at a round table talk held by lawyers and journalists at *Frankfurter Rundschau* recently with Frankfurt quarter sessions judge Rudolf Wassermann presiding.

APO demands were felt by the lawyers present, including three senior judges, two public prosecutors and two university professors, to be — with reservations here and there — not only justified but also necessary. In a debate entitled "Contemporary Court Proceedings" they made no bones about their views.

In a recent Munich case against a laws graduate by the name of Pohle a sensation was created by the defendant when he called both the judge and the prosecuting counsel by their surnames. The assembled company at Frankfurt thought this was quite conceivable and a number of those present even felt it desirable in the interest of humanising the proceedings.

It was also agreed that the word "accused" as a form of address is out of place in a modern courtroom. Sad to say, not all judges and counsel have heard the news.

Having to stand up at every conceivable juncture is not only suspect to members of the Socialist Student League (SDS). "Standing is retained because courts have always had to stand up," noted Professor Baumann of Tübingen, who was decidedly opposed to this having to be the case. The defendant, for instance, ought to sit at a table so as to be able to take notes.

Professor Baumann's opinion was shared by Judge Kütz of the Federal Administrative Court in West Berlin. Dr Kütz argued that standing up was not only an outward gesture but also a sign of reverence and submission that oppressed and subdued the defendant.

In the opinion of the overwhelming majority of those present visitors to courts who remain seated when a witness is taking the oath, usually left-wingers in this instance, too, are in the right, even though they can still be thrown out or fined for contempt for their misdeemeanor.

Professor Baumann, for instance, advocated abolishing standing up while a witness is taking the oath, particularly as the Federal Supreme Court has already laid the groundwork by secularising the oath. Once again agreement was general, with it being pointed out that declara-



The second chamber of the Federal Constitutional Court in Karlsruhe about to go into session (Photo: dpa)

tions on oath may be made seated. It was agreed that the oath ought to be abolished altogether, or at least drastically cut down to size.

Standing up when sentence is passed found few supporters too. A new view of criminal law, said Chief Public Prosecutor Pfromm of Bonn, must be taken into account in gestures too. "If judgment is intended to aid a socially sick person it must be made in a different way."

Standing up to hear the sentence passed is unnecessary, Judge Wassermann reckoned, because the idea must be to listen to it carefully. "What we need is more sobriety in criminal law," Professor

Baumann stated, "if the sentence is to herald rehabilitation. There is no need to try and conjure up an atmosphere of ceremony."

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## Oath-taking in court has become something of an anachronism

Intended to convey a ceremonial, almost sacred impression formality often turns out to be mere routine in the courtroom, as stereotyped as shaking hands or saying "How are you?"

Day by day, whether they want to or not, hundreds of people appearing as witnesses in court cases have to raise their hands and repeat the phrase "I swear to tell the truth, the whole truth and nothing but the truth, so help me God."

Yet this is a phrase about which Plato had misgivings 2,300 years ago, criticism that was subsequently echoed by Kant, Hegel and Schopenhauer and epitomised by Sling, the well-known court reporter of the twenties, as a medieval left-over.

"The oath calls on God as witness to the truth... It signifies an avowal to God and is described as an act of reverence to God," Karl Peters wrote in the *Staatslexikon*. The first chamber of the Federal Supreme Court made a slightly vaguer ruling in 1955. "The oath is a statement characterised by ceremonial, partly sacred emphasis."

It can therefore undisputedly be assumed that the oath is in all cases classified as a call on God or a higher force as witness and that consequently large sectors of the judiciary feel the court to be a moral institution, an instrument of divine order.

Even though arguments are based on extremely varying lines it is at this point that increasing criticism of the nonsense of thousands of oaths sets in. Many

personalities firmly rooted in Christianity, such as former Justice Minister Gustav Heinemann, view the ceremony of the oath before a worldly court as a degradation of the faith and maintain that the name of God should not be called on unnecessarily.

Their understandable dislike of the ceremony is based not only the realisation that the oath, on which a court can insist, represents an abuse of religious ideas for state purposes, but also the court; it may also have been rejected by early Christian thought. In the Sermon on the Mount Jesus says: "Yet I say unto you that ye ought never to swear on oath."

More recent critics, on the other hand, have felt the oath in court to be superfluous and pointless for a number of objective reasons. The criminal courts, they argue, serve the purpose of coming to a just judgment. This presupposes finding out the truth about an illegal act. In this context there is no convincing basis whatsoever for the carefully preserved tenet that the oath is the basis of all justice.

For basically speaking the oath represents a kind of curse on oneself. It presupposes the belief that a superior force will punish false evidence in God's name. Yet in this day and age there is every reason to doubt whether the majority of witnesses are so firm in their belief in the personalised God of past centuries who sees all and rules all or whether their belief in hell fire is so

Judge Sarstedt of the Federal Supreme Court defended robes (dating back, in this country, to the French revolution) as a sign of a democratic outlook that also made it apparent that something special was going on.

Professor Kütz, on the other hand, was not prepared to let this pass, as in his view legal garb has long since been transformed into what it is. "In Switzerland," he added, "proceedings are conducted in a fitting manner without robes."

Other speakers opposed the judge's robe on grounds of its worrying effect on the defendant, even going so far as to ask why, if they had to exist, JPs were allowed to wear them?

The last point dealt with was the design of the courtroom. On this too Professor Baumann held a particularly progressive view. "If the present form of proceedings handicaps the defendant," he said, "this in itself is reason enough to change it."

For this reason Judge Raschorn of Bonn would like to see the defendant seated on the same level as the rest of the court "since he too plays a part in getting to the truth." And Professor Klug of Cologne demanded round-table proceedings for all concerned (though he would not object to a square one) because "the constitution in fact calls for one." In this he too gained a great deal of approval.

"This discussion," Judge Wassermann concluded, "will be a help to us in our efforts to make criminal proceedings more humane and to reform the administration of justice. We ought not to wait for the legislator but show initiative of our own. I believe that today we have dealt with the problems of the years to come."

Erwin Tochtermann  
(Süddeutsche Zeitung, 2 June 1969)



"I swear to tell the truth, the whole truth..." (Photo: Grete Rohlf)

deep-rooted that the oath is an inviolable basis of their creed.

Our tradition-hampered administration of the law would sooner seem to be based on the simple idea of the deterrent and to employ the oath as a means of bringing psychological pressure to bear on witnesses, who are viewed with the gravest mistrust. A fine method this, using fear to find out the truth. In the background of every oath is its hateful pendant, the potential prison sentence for perjury.

Incessant oath-taking is no help in finding out the truth. If anything it stymies the process. What witness, intimidated by this pseudo-sacred exercise, is going to admit to the assembled company prior to raising his hand that he is about to tell a pack of lies?

Worse still, the oath contains a built-in risk of being a continual excuse for easy-going, superficial judges to take statements made under oath at face value.

Continued on page 5

## SOCIAL WELFARE

## Greater social security means higher contributions

Social security policy specialists in Bonn did not meet with undivided approval when a year ago they announced that from 1 January 1969 old-age pensions were to increase by 8.3 per cent. Many a wage- and salary-earner examined his finances and came to the conclusion that his income would not be keeping pace with this development.

In point of fact wages and salaries increased by roughly seven per cent in 1968 and were industry to stick to Federal government guidelines they would rise by about the same amount this year.

The boot is now on the other foot. In 1970 pensions are to be increased by 6.4 per cent, while wages and salaries are expected to rise by at least the same amount as this year.

Like the wage- and salary-earners a year ago old-age pensioners this year have no cause for complaint about varying treatment. According to the present rules of pension increases the rate of increase is pegged to the rise in gross income three years beforehand. To this extent the 1971 increase will not be a bumper crop for pensioners either.

Can this country even afford a pension scheme in which the rate of increase is pegged to wages, people are increasingly

wondering. There are already 46 pensioners for every hundred contributors and by 1975 the same hundred wage- and salary-earners will have to foot the bill of higher pensions for fifty recipients.

The only possible consequence is that the working population will have to pay higher contributions. It is already clear that in 1970 the proportion of earnings accounted for by social security contribution will increase from sixteen to seventeen per cent and rise to eighteen per cent a few years later.

Steadily increasing burdens on employers and employees in the form of higher contributions, however, endanger continuous economic growth, which again is the indispensable basis of growth in pension rates and volume of in-payments.

Although everyone concerned in Bonn must be aware of the existence of this vicious circle fresh pledges are made from one day to the next that no change will

## Researchers consider leisure

It is no coincidence, Count Blücher told the annual general meeting of Emnid, the market research consultants, in Frankfurt, that together with the concept of marketing developments have occurred at the present stage of industrial society, in which social structure is no longer determined primarily by production and profession but increasingly by sales, leisure and consumption.

The amount of leisure and the amount of freely available income form a parallelogram of the economic power of private consumers. At the turn of the century the working man toiled more than 4,000 hours a year. The present figure, Count Blücher claimed, is 2,400.

In the foreseeable future, according to sound estimates, a 35- to forty-hour week will bring the number of hours worked per year down to about 1,500.

Including the time spent travelling to

and from work the average employed person now spends about ten hours a day in the work process - fifty hours a five-day week. Already leisure time on workdays and over the weekend amounts to forty hours a week and when the 35-hour week is introduced man will have more leisure time than hours spent working.

Six leisure activities predominate. The main one is entertainment and diversion, followed by home and family interests, sport, education, carers training and hobbies.

Marketing, which is aimed at requirements paid for over and above minimum needs, must perform formidable tasks to make the general public aware of the realities of their environment.

(Hannoversche Presse, 31 May 1969)

Continued from page 4

Lastly, punishment lies in store for people who can be proved to have told the courts lies.

Yet the law as it stands provides for fines or imprisonment for false statements made not under oath whereas false statements made under oath come in for penal servitude. A distinction is thus made between a straightforward and a potential lie. The situation could hardly be more illogical, it would seem.

The conclusion is clear. In order to protect the law from lying witnesses all that is needed is the treat of punishment for false statements, as is already standard in Eastern Europe. The oath, which creates more problems than it solves - if, indeed, it solves any - can cheerfully be dispensed with.

When all is said and done the courtroom is no place for dubious, religiously-tinged exercises. The oath before a court of law is an anachronism.

Karl-Heinz Krumm  
(Frankfurter Rundschau, 30 May 1969)

## Wages must go up this year

Stock exchange quotations are only a few per cent below the record high of summer 1960. The hectic demand that has brought brokers record turnover is definitely largely due to the influx of hot money but is nonetheless an indication that the profit potential of Federal Republic industry is rated higher than at any time in recent years.

Quarterly reports, and there are still unfortunately too few of them, from companies in this country convey the impression that this optimism is fully justified. The well-nigh incredible has happened. The record 1968 results are being far outstripped by 1969 profits.

An increase of ten to fifteen per cent in clear profits over the first few months of 1968 is the rule and a rise of twenty per cent of more is far from out of the ordinary.

Small wonder that the trade unions are growing restless. For two and a half years they have exercised wage restraint, making possible Economic Affairs Minister Schiller's tallomade upswing.

It is not, of course, true that management alone has benefited from the new boom, as a number of extreme left-wingers maintained at the Munich congress of the Trade Union Confederation (DGB).

## DIE ZEIT

FÜR POLITIK, WIRTSCHAFT, KUNST UND KULTUR

As was to be expected with the labour market cleaned out wage-rates paid have considerably increased.

It is this increasing gap between union rates and the rates actually paid that is bound to annoy the unions. They naturally want to prove to their declining membership that their work has been successful.

Employees' representatives will undoubtedly take the opportunity offered by the next round of concerted action talks between employers, employees and Ministry officials on 20 June to press home demands for a powerful increase in union demands with a straight refusal. To adopt a position such as the stand taken by Professor Balke, chairman of the employers' association, who has warned against a wages explosion, would be both incredible and in the long run impossible to maintain.

When is the time ripe for wage increases if not now a boom is on? The growth rate is higher than expected. Management is earning more than ever before, industrial prices have remained practically stable for two and a half years and this country's manufactures have grown correspondingly unbeatable good value on the international market (too cheap, according to some).

At this year's Hanover Fair Karl Schiller was already proclaiming that the estimated growth targets for 1969 would have to be upgraded. The Cabinet ought to produce the new figures promptly.

A wages policy based on economic facts is the only way to guarantee fairly trouble-free economic growth, from which management and labour benefit in equal measure. Cooperation between the two is only possible provided the medium-term requirements of both are satisfied. 1969 must be a year of wage increases.

Dieter Stohs  
(DIE ZEIT, 30 May 1969)

## Automation process stepped up



The recession of 1967 accelerated the pace of automation and other technological innovations. On average 770,000 people fewer were employed in this country in 1968 than in 1966 yet production (gross domestic product) rose by almost seven per cent. The productivity growth rate reached record proportions, according to Günther Friedrichs, automation expert of IG Metall, the metalworkers' union, at a conference of Social Democratic salary-earners in Hamburg.

According to an IG Metall press release Herr Friedrichs stated that wage-earners had been far more seriously affected by the reduction in the number of jobs available than had salary-earners but that salary-earners, mostly clerical staff, need by no means feel secure.

IG Metall had investigated parts of ten

factories that had been converted to electronic data processing. Thirty-five per cent of all jobs had been rationalised away and a further 21 per cent had been fundamentally changed as a result of the change-over. High-ranking staff had often been affected by the combination of departments.

Herr Friedrichs welcomed the Bill introduced in the Bundestag by the Social Democratic party to set up a commission for technological and structural change. He called on the Bundestag to approve the measure before the forthcoming general election.

This country, he claimed, was running the risk of falling foul of a social as well as a technological gap.

Large-scale attempts to deal with the risks and prospects of automation by means of scientific methods had been completed in the United States and the Netherlands in 1966 and 1968 respectively, he noted.

(Frankfurter Rundschau, 31 May 1969)



## MUSIC

## Berlin music college 100 years old

MENDELSSOHN WAS TO HAVE BEEN ITS DIRECTOR

Ostentatious display and long-winded speeches are not his scene; he would rather wear a pullover than a dinner jacket, and he feels more at home in an electronics laboratory than on a speaker's rostrum. Nonetheless, Boris Blacher, director of the West Berlin College of Music, could not get out of a ceremony to mark the hundredth anniversary of the college, which was held in Charlottenburg



Boris Blacher  
(Photo: Fritz Eichen)

Castle and followed by a reception. Honour demanded that this jubilee should be suitably celebrated.

When the Berlin College of Music was founded in 1869 no one could have foreseen that one day it would be one of the most modern and significant music colleges in the country.

Prussian officialdom had other things to worry about rather than generously subsidising musical education and anyway the Muses were only encouraged if they supported the regime and liaised as closely as possible with the throne and the altar.

The Singing Academy, but particularly the "Ordinary Singing School" founded by Carl Friedrich Zelter in 1820, could be regarded as the forerunners of the Berlin College of Music. This school trained choirmasters and organists and thus became the predecessor of the "Institute for Religious Music" which many years later was incorporated into the College of Music.

Leipzig first

When Felix Mendelssohn-Bartholdy was working in Berlin, arguments over this division of responsibilities prevented the establishment of a music school under his direction. Disappointed, he turned his back on the city and went to Leipzig.

And it was there that the first German music college was founded in 1843. Munich followed suit in 1846 and Cologne in 1850. In the same year Julius Stern opened his private "Stern Conservatoire" in Berlin, which soon became known far beyond the city limits. In the meantime, officials from various Berlin ministries,

**DIE WELT**  
UNABHÄNGIGE ZEITUNG FÜR DEUTSCHLAND

the Academy of Arts, the royal opera and the Singing Academy were still arguing as to when, where and how a state music college should be founded and organised.

In 1869 the laborious tug-of-war between official bodies was finally ended. On 10 May a cabinet order granted permission for the establishment of a "college of music attached to the royal Academy of Arts."

It was a fortunate coincidence that a year previously the 37-year-old violin virtuoso Joseph Joachim had taken up residence in Berlin. He was asked to become director of the Viennese music college, but he opted for Berlin and so on 1 October classes began in the classical palace of Graf Athanasius Raczynski.

Joachim's appointment proved to be beneficial for the "royal academic college of music." True, he was unable to engage the famous pianist Clara Schumann-Wieck (Schumann's widow) and the equally renowned singer Julius Stockhausen. But the list of teachers soon included Ernst Rudorff, Heinrich de Ahna, Alexander Dorn, Benno Härtel and Friedrich Kiel, all of whom were experts in their own particular fields.

In 1883 the college moved to Potsdamer Strasse near to Theodor Fontane's home. At that the college had almost eight hundred pupils; the teaching staff included Philipp Spitta, the Bach biographer, and Max Bruch and Waldemar Bargiel taught composition.

Soon the house in Potsdamer Strasse

became too small for the expanding college, and it was finally housed in a new neo Baroque building on the corner of Hardenbergstrasse and Fasanenstrasse.

Twenty-four years later, in 1907, Joachim died. It is to his credit that the college became one of the leading musical institutes in the world. He was succeeded by Hermann Kretzschmar who was also a first class educationalist, musician and organiser.

In 1920 Franz Schreker took over the direction of the college and he had the good fortune to find a deputy, Georg Schünemann, who was equally at home with classical and contemporary music. He was the real "head" of the college. Teachers such as Hindemith, Schreker, Reznicek, Kuhlentkampff, Schünemann, Curt Sachs and Oskar Bie ensured the college international fame during the Golden Twenties.

'Hindemith case'

The Golden Twenties were followed by the "Brown Thirties" and the politicising and provincialisation of the college which was spectacularly initiated by the "Hindemith case" — which was in fact nothing more than a case of National Socialist philistinism.

At the end of the Nazi era the college was in ruins. The first years of reconstruction are linked with the names of Bernhard Benedikt, Paul Höffer and Werner Egk. Boris Blacher was appointed director in 1953.

Blacher has succeeded in re-establishing the college's earlier reputation. His composition courses attract pupils from

## Should John Cranko's Stuttgart dancers form the National Ballet?



cia Haydee, the present prima ballerina in Stuttgart. (Admittedly, Susanne Hanke is only 21 years old as yet.)

Apart from this, the Federal Republic certainly does not possess a comparable, cultural ambassador in this field which would be as convincing and, what is more important, as generally comprehensible as the Bolshoi or Kirov Ballets, the British Royal Ballet or the New York City Ballet.

After their successes in Paris, Baalbek and South America, agents from all parts of the world have been anxious to engage the Stuttgart troupe. In the meantime the Foreign Affairs Ministry has even realised that it has an exemplary propagandist in the Württemberg State Ballet. One can but hope, in this context, that in future tours by somewhat suspect companies which tend to damage the image of the Federal Republic abroad will be avoided.

But there are difficulties in the way of simply renaming the Stuttgart company. Quite apart from the jealousy amongst

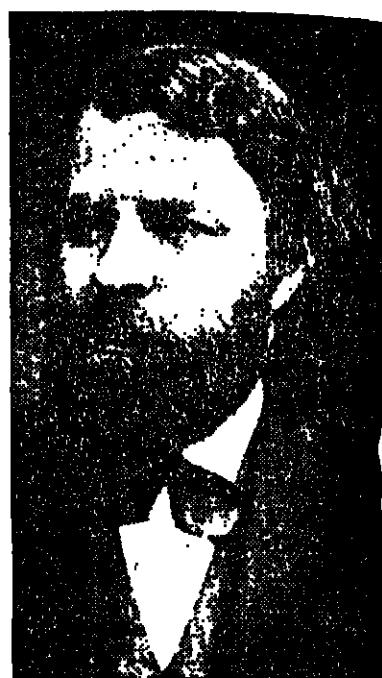
the Federal states (this is not meant to be a dig against federalism which, particularly as far as culture is concerned, has definite, worthwhile advantages), Baden-Württemberg would justifiably insist that the present title should stand or at least be retained alongside the name of the national company.

Compromise

However, a compromise should be able to be worked out. For example, the troupe could perform abroad as the "Federal Republic National Ballet from Stuttgart" with the sub-title "Württemberg State Ballet" whilst at home the old name could be preserved. Similar compromises apply to football and other sporting activities.

If a solution acceptable to all parties was negotiated, then there should no longer be any impediments to re-naming the company. However, the decision is up to the Education Ministers' Conference, a body which is not exactly renowned for quick decisions.

Heinz-Ludwig Schneider  
(Handelsblatt, 27 May 1969)



Joseph Joachim  
(Photo: Staatsbibliothek Berlin Bilder)

all over the world. Klebe, Erbe, Reimann, Burt and many other composers have attended the West Berlin college. To him, it is perfectly natural that the college's work should include the most modern electronic compositional methods, and to this end he cooperates with the neighbouring Technical University.

In 1954 the concert hall designed by Paul Baumgarten was opened. The foundation stone of the theatre, which has also been designed by Baumgarten, was laid on the day of the centenary celebrations. However, the centenary does not justify dithyrambic choruses of jubilation.

The West Berlin College of Music may be renowned from Japan to the USA, but it too must reconsider the methods and aims of its teaching. The supply of orchestral musicians, for example, does not meet the demands of major orchestras by any stretch of the imagination.

Helmut Kotschenreuther  
(DIE WELT, 23 May 1969)

## THINGS SEEN

## Ernst Nay's last works shown at Cologne retrospective

**Frankfurter Allgemeine**  
ZEITUNG FÜR DEUTSCHLAND

Werner Haftmann writes in the catalogue of the first major retrospective of E.W. Nay's works, after the artist's death, that Nay was in a discordant frame of mind in the last months of his life. The exhibition in Cologne's Wallraf Richartz Museum of his latest works and a good selection of his earlier paintings would have strengthened him in his conviction that his mature work represented the culmination of his art.

Haftmann says that Nay suffered deeply from having more or less faded from the exhibition scene. He observed with anxiety the "growth of deliberately anti-artistic tendencies."

Nay was not invited to the fourth *documenta* in Kassel in 1966. Four years previously, Kassel honoured him by hanging from the ceiling three large pictures and displaying a cabinet — a tribute paid to very few other artists.

Ernst Wilhelm Nay was not fortunate enough to have died before losing favour with the public. The idol of post-war art was knocked off his pedestal.

It is difficult to explain why. Not even the general departure from abstraction seems a sufficient reason, since New Realism, Pop Art and later trends have not undermined the reputations of Pollock, Wols, Motherwell, Antoni Tàpies and other artists.

With Nay fell, however, Hartung, Soulages, Manessier and many exponents of *art informel*, which dominated the scene in Europe in the fifties.

The sixties, obsessed with new values, created new dimensions. Any period of time can develop its own criteria. The only question is whether these will survive.

What of Nay in 1969? Art has again drifted away from objectivity to the idea, to a spiritual artistic act.

A newly defined freedom is evolving — live in your head. Action on the part of the artist therefore, whatever form this takes.

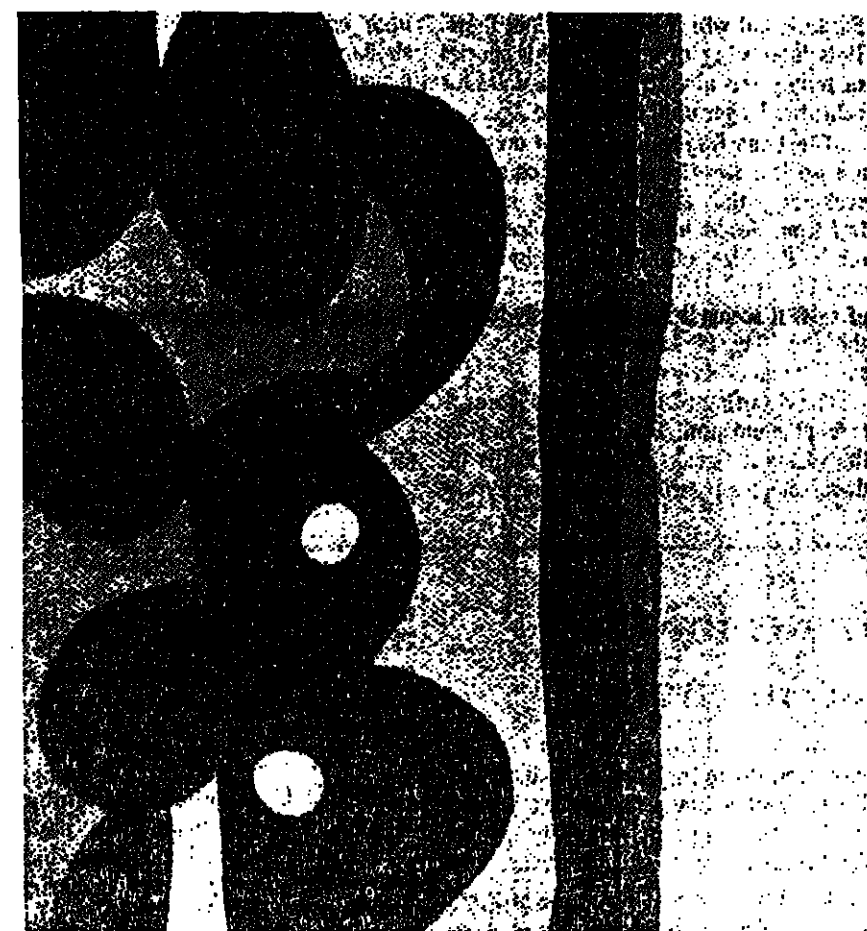
Action painting has always been correlative to canvas, but the connection from the present back to this point is obvious. Nay's last pictures were the most spontaneous compositions he ever realised within the limitations of canvas. They represent relatively free forms from the movement of colour.

Even at this point therefore the artist is appearing in a new light, not as the genius his admirers in this country thought him to be but as a creator within the boundaries of a historical frame — the

## New opera for Hamburg from Camus book

Milko Kelemen, the Yugoslav composer, who has been lecturing for some time at the Robert Schumann Conservatory in Düsseldorf, is writing an opera based on Albert Camus' *L'Etat de siège*. The premiere is scheduled for January 1970 in Hamburg's Staatsoper.

(Lübecker Nachrichten, 23 May 1969)



Ernst Wilhelm Nay's Blaufigurierung, 1968 (Photo: Katalog)

epoch of the Second World War which brought forth more versatile and renowned artists than Nay.

Nay cannot be blamed for not having taken earlier notice of Delaunay, his colour-form theory that could have been so important for Nay. Nor can he be blamed for not having appreciated the fluidity and spatial dimensions of the later Morris Louis.

Nay's origins in German Expressionism and his subsequent isolation as a "degenerate" artist in the Nazi era explain his self-consciousness. The post-war years were a period of delayed fulfilment for Nay.

The artist realised what many of his admirers overlooked, that his latest works were in many ways the perfection of his

art. Everything prior to these were stages of his development.

Nay achieved his greatest freedom and independence in the pictures he painted in the period from 1965 to 1968. He adds colour to colour, allowing colour in every texture to enclose almost primitive form that has a strange quality of tension.

His art in these years recalls Matisse's great *papiers découpés* pictures and also certain works of Morris Louis. This artist admittedly outshines Nay in originality and empathy into colour-form.

A large work by Louis, from the Ludwig collection, his *Alpha-Ro* executed in 1961, hangs beside the entrance to the Nay exhibition in the Wallraf Richartz Museum. This is an unintentional confrontation, but it seems as if *Alpha-Ro* —

## Repertory theatre in Berlin not over-exciting

on this side of the dividing Wall. East Berlin has never reacted favourably to an invitation from the festival organisation in West Berlin.

Despite this rebuff, however, the annual May festival was a success, unlike previous years when many theatres were obliged to cancel their engagement at the Festival, because of copyright or contractual reasons.

What were the artistic merits of the Festival? The selection by the ten-member jury of critics from the range of productions in the season now coming to a close was not very convincing.

If the Festival is understood as a kind

violet, green, orange and blue in a centre-picture diagonal flow of colour, merging in a magnificent unity of form and colour — intended to banish Nay to his (indisputably honourable) position in post-war German painting.

Louis, who died in 1962 aged fifty, mastered the art of applying colour to canvas with a sure instinct which Nay only sporadically displayed. His increasingly firmer grasp of this instinct can be traced in the Cologne retrospective.

Ernst Jünger visited Nay in his studio in Le Mans during the Second World War. Nay found the studio by a lucky chance. He was earning his bread at the time as a cartographer.

Jünger noted in his diary, "I was especially pleased by his saying that in his work he had reached a point at which the canvas acquired tension." At such moments it seemed to him that the picture became extremely enlarged.

Pastoral style

At that time Nay was developing a pastoral style recalling Chagall in expression and Kirschner in a formal sense. Jünger's comments, however, suggest that for Nay the act of painting was an approach to limits of personal and artistic experience. This gives Nay's work its existential dimensions. The brooding, introvert seriousness is very obvious in the *Lofofen* pictures of the late thirties and in the small-scale compositions of the Hecate cycle of the late forties.

The paintings done in subsequent years in which Nay dispensed for the first time entirely with the human form and concentrated solely on circular form as colour media. This marked his decisive advance into the freedom of his later years. These periods are well represented in the exhibition each with five fine works, whereas his largely unknown later work up to the last canvas he painted in 1968 include 40 paintings.

Nay regarded his last works, the result of an uninterrupted creative period, as the crown and synthesis of his art, according to Haftmann. The artist found complete expression according to his own words. Today we are able to stand back and appreciate Nay with some degree of objectivity. This enables us to see him beyond any personal grievances within the context of his time and in peculiarly German circumstances. Hans Sirelow

(Frankfurter Allgemeine Zeitung für Deutschland, 23 May 1969)

of sporting competition there can be no doubt both contributions of Munich's Residenz Theater, Schiller's "Robbers" and Heiner Müller's *Philoctetes* drew most applause and the best notices.

In comparison a mixed reception was given to the Stuttgart people who came with Tankred Dorst's *Toller* to the Wuppertal group's *Arthur Aronymus* with Else Lasker-Schillers and also to the Heidelberg production of the British "Zig Zag".

As interesting as the sets may have been as a basis of comparison, the Heidelberg production produced in the home theatre and then produced in Berlin served little purpose and cost money.

Abolishing decentralisation of the theatre, in favour of Berlin has its merits, perhaps, but this must be done properly to ensure that Berlin's theatres are not considered so good that they have no room for improvement.

(DER TAGESSPIEGEL, 23 May 1969)



An expedition from the Frankfurt Senckenberg Institute recently investigated bone fragments of dwarf hippopotami and giant dormice from the Ghar Dalam cave in Malta. This cave, which contains a variety of bones, has not yet been exhaustively researched and the Frankfurt scientists found evidence that the isolation of fauna on the island produced not only dwarfs of large animals but also giant forms of small creatures.

Under the direction of Dr Rietschel from the Senckenberg Institute, five scientists — including Professor Pöschel of Vienna who researches domestic animals — spent several weeks investigating the ice-age bone layer of the Ghar Dalam cave.

They were able to establish that the peculiar 'hippopotamus-like' creatures whose remains they found on the island did not develop in Malta, but further north in Sicily and Sardinia and that the animals migrated to Malta when a temporary land-bridge existed.

The remains of rodents which were discovered included the soft bones of an

## PALEONTOLOGY

### Interesting animal bone fragments at Ghar Dalam caves in Malta

ice-age mouse which is also known from Sardinia but which became extinct there. It is interesting to note that this species of mouse was able to survive in Malta for centuries longer until the Bronze Age.

The bone fragments of giant dormice are no less significant when it comes to evaluating the effects of the island's isolation. In Malta these dormice were often the size of rabbits, whilst their equivalents on the mainland are the size of rats. It seems that isolation only led to the dwarfing of large mammals, whilst smaller mammals became larger.

The dwarfing of large animals is not a new phenomenon. For example, during the classical Greek period the skulls of dwarf elephants, which were already ex-

inct, were found. Because of the huge nose cavity, these skulls had a certain similarity with the skulls of one-eyed magatheria and scientists believe that these bone finds may have given rise to the myth of the Cyclops, Polyphemus.

However, as yet little research has been devoted to the hereditary, biological mechanisms which led to the development of these peculiar animals and of the various dwarf and giant forms. It appears that this process was not only influenced by fortuitous mutations, but also by lack of food, restricted living space and numerous other external factors. For this reason Malta represents one of the most interesting and productive areas for research into these Mediterranean fauna.

It is true that a century ago caves containing interesting remains of strange dwarf animals, including tiny elephants about three feet tall, were found in Malta and on other Mediterranean islands. But these treasure troves of science have not yet been systematically investigated.

During the next few weeks the Frankfurt scientists will examine and evaluate in more detail the finds they brought back from Malta. But another expedition to the island is already planned for next year, and it is hoped that this occasion the knowledge of the island's palaeontology already gained will be enlarged. (DIE WELT, 27 May 1969)

### New Roman site at Rheiderland

By the end of this year at the latest the public will know whether Prof. Werner Haarnagel, director of the Lower Saxony Institute for Land Research at Wilhelmshaven has come across traces of a Roman fort during excavations at Jemgum monastery in Rheiderland. The assumption is corroborated by the discovery of Roman coins in the area.

Haarnagel says that the excavation of the prehistoric site in Hatzum, near Lee, should also be completed this year. Taking several excavation sections, archaeologists have unearthed six superimposed layers of old Frisian settlements dating from the sixth to the third centuries BC. It is probable that there was a harbour on this site 2,500 years ago. (DIE WELT, 28 May 1969)

when he carries out his next experiment. The experts confirmed enviously that even a modern computer-operated oven does not produce more exact temperatures: temperatures can easily be judged from the colour of the embers.

It must be admitted that during the experiment the Roman oven used 58 cubic metres of wood so that production costs were twenty times higher than present costs. But Dr Sölter is sure to cut the cost next time. (CHRIST UND WELT, 23 May 1969)

### Back to the Romans for the secrets of lime-burning

"Back to the lime-burning methods of the Romans," was the slogan of a few Bonn archaeologists at Iversheim near Euskirchen. People came from far and wide to see an unusual spectacle. Within a fortnight ten thousand people visited the site, including whole classes of schoolchildren.

Something scarcely credible was being noised abroad: Roman lime-burners apparently knew methods and burning secrets which are unknown to today's highly developed lime industry. Probably for this reason industrial experts greeted the theories of archaeologists based on the reconstruction of excavated Roman ovens with unconcealed scepticism.

Nevertheless, the archaeologists were able to arouse the lime experts' curiosity and the latter did not refuse information and material support. But the industrialists did not expect the experiment to be successful until the archaeologists actually began to burn lime according to the Roman method.

But the really curious thing about this experiment is that it was only undertaken now. Hundreds of Roman lime ovens

have been discovered, and so in itself the discovery of a whole factory established by Roman troops in Iversheim by an alert, retired forester was not a sensation.

However, in recent times the attitude of archaeologists to their finds has changed. Their enthusiasm is no longer satisfied with collecting and cataloguing finds. Suddenly they also want to know how a thing really worked.

Recently their attention has been concentrated on the details of everyday life, on the infrastructure of history. And this involves understanding the technical skills of past ages. Fortunately, archaeologists come from varied educational backgrounds these days.

The Bonn Museum not only has a graduate physicist on its staff but also an expert chemist, Dr Sölter, who was in charge of the Iversheim experiment. When, after several abortive attempts, the suffocating smoke finally began to rise from the oven, the details of Sölter's theory were incontrovertibly confirmed.

In fact, he is confident of managing without modern measuring equipment

### Research institutes to be set up at Jülich and Stuttgart

According to Gerhard Stoltenberg, Federal Minister of Scientific Research, the establishment of two major research institutes into solid bodies at Jülich and Stuttgart will take into account the increasing significance of this branch of physical research.

The Jülich institute will be primarily concerned with the problems of superconductivity and magnetic structures, whilst the Stuttgart institute will concentrate on research into half-conducting and non-conducting materials.

These substances play a particularly important role in modern electronics and the construction of computers. Supraconductors enable, amongst other things, electric energy to be transported without loss. (DIE WELT, 22 May 1969)

### Pharmacological symposium at Regensburg

An international symposium on clinical pharmacology is to be held annually at Regensburg University. This was decided by the symposium's founding committee to which a number of internationally famous scientists belong.

Professor O. Smahel, director of the Prague Institute for Experimental Therapy, was elected president of the first symposium which is to be held at the end of 1970. The purpose of the gathering will be to promote clinical pharmacology which plays an important part in the testing of medicines. In order to achieve objective assessment of medicines, co-operation between clinical experts and pharmacologists must be decisively improved. (Frankfurter Allgemeine Zeitung für Deutschland, 28 May 1969)

## SCIENCE

### Genetic destruction through chromosome change

#### MATING CONTROL TO CONTROL PESTS

Two years ago Professor Hannes Laven, director of the Mainz University Genetics Institute, flew to Burma. His luggage included a number of small glass test tubes containing a few hundred larvae which had been reared at the institute.

These larvae were the weapons used to rid the Burmese village of Okpo of gnats within a few weeks. "Action Okpo" was the first major experiment in the field which aimed to exterminate a whole insect population through genetic methods.

In the intervening period the Mainz genetics researcher has found a new way of encouraging millions and thousands of millions of parasites to destroy themselves within a few generations, without using insecticides or biological contamination. This is a simple, inexpensive method which could put an end to numerous human, animal and plant diseases that are spread via insects.

The first step towards "genetic destruction" was taken at Laven's laboratory in Mainz. This was the discovery of natural "incompatibility." When trying to

applies to gnats. Only here are there closely related strains which mate but do not reproduce. This method cannot be applied to other insects — to name but one example, the American boll-weevil.

"Considerable effort has been devoted to trying to find incompatible strains but without success. So we looked for a new method of genetic control and found a technique which — we afterwards discovered — was theoretically pioneered by Russian researchers thirty years ago but was probably not put to practical tests. This may have been because at that time the Sysankó course was prevalent in Russia. The new method is called Semi-sterility through translocation."

#### Faulty spermatozoa

At this point Professor Laven had to go into more detail to explain the principle. If sexually mature, male gnats are subjected to a dose of approximately 4,000 units of radiation most of the creatures do not suffer from any physical or organic damage. But the chromosome pattern in the spermatozoa will probably be broken at some point between the genes.

After the X-ray treatment this chromosome breach can be "repaired" but not usually in such a way that the chromosomes link up as before. In fact it is more likely that new series of genes will form on the chromosome chain because two neighbouring halves of different chromosomes may combine.

As creatures with modified gene series still possess all hereditary factors, even if not in the natural sequence, they are still capable of survival and reproduction. But the life expectancy of their offspring is limited.

According to the point at which the chromosome breach occurred, the eggs fertilised by one of these "translocation male gnats" usually only produce forty to fifty, and sometimes only twenty per cent of the normal number of offspring.

"From this second generation we isolate the males with inherited translocation and pair them off with normal females. If only some of the third genera-

tion insects survive, we can be sure that we are dealing with this type of male that transfers his mutated genetic pattern and hence semi-sterility to the next generation.

In addition, if the chromosome breach occurs at certain points in the sex-determining chromosomes, then in the next generation only the males survive and they are all affected by translocation.

"If I assume that fifty per cent of the offspring of each generation of these semi-sterile creatures will not survive," says Professor Laven, "and if I release one laboratory-bred insect for each natural male, then I can calculate when the gnat population has reached nil. I used a computer which produced an extermination graph."

The graphs, which the genetics professor got out, showed that releasing semi-sterile male gnats twice or three times during a season could reduce the gnat population to two per cent. The number of laboratory males released can be constantly reduced because as the process gets under way new semi-sterile males occur naturally.

In no time at all, the release of male insects with a different translocation would destroy the remaining two per cent of the gnat population. Professor Laven comments: "There is no cure for semi-sterility because it is hereditary."

"Semi-sterility has an advantage over complete sterilisation in that because of the relatively small dose of radiation the insects are not physically weakened, but are still absolutely competitive."

#### French plans for gnat control

The professor was asked whether there was any prospect of the first field experiment taking place this summer or autumn.

"Preliminary, tentative discussions are underway to see if the first tests could be carried out in Camargue, a gnat-infested region in the south of France."

"The French development ministry has already prepared plans for gnat control in this area. These detailed biological



Professor Hannes Laven  
(Photo: privat)

And the costs of this method? Considerably less than the amount which would have to be spent on spraying large areas with insecticides, quite apart from the fact that genetic extermination does not affect the rest of the organic world in any way.

American entomologists have estimated that it is possible to rear one million gnats with translocated chromosomes for thirty dollars — even taking into account the high costs of laboratory personnel in the USA. In developing countries production costs would be much lower.

"In my laboratory I have so many semi-sterile gnat strains with varying hereditary quotas that I could begin the first field experiments anywhere in the world within a fortnight. For example, if I was working with strains which only produce male offspring, it would not be necessary to let loose fully grown gnats. The eggs or larvae could simply be placed in the breeding area and nature would do the rest."

### Results of bone marrow transplants in rats unsatisfactory

After transplanting the bone marrow of rats which had previously been subjected to a normally fatal dose of X-rays it was noticed that dangerous marrow fibrosis occurred. Nine per cent of the rats were affected in this way and hence the formation of marrow was inhibited. In fact 26 per cent of the rats which died in the critical post-operative period, between the 15th and 40th day after the transplant operation, suffered from some kind of fibrosis.

This utterly unexpected discovery was made by researchers at the Ulm University department of clinical physiology, which is attached to the basic clinical research centre, when they were carrying



out experiments to try and improve the compatibility of transplanted marrow through preliminary treatment.

At present marrow transplantation is the only possible means of restoring the formation of blood in the marrow, if this system has been upset by severe radiation. Further research will now investigate the causes of marrow fibrosis which might also occur after a human transplant. (Frankfurter Allgemeine Zeitung für Deutschland, 28 May 1969)

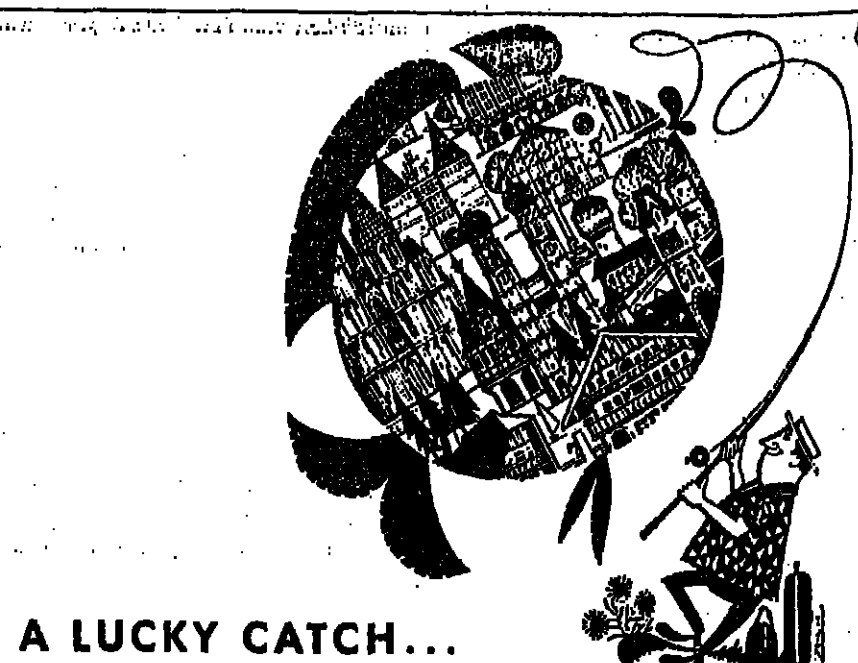
investigations would be a suitable basis for determined action. But we should remember that parasite control by means of semi-sterility through chromosomes translocation is not limited to gnats.

"For my laboratory experiments we worked with gnats because we already have useful experience in this direction as we have been breeding gnats for years. For us, the stinging gnat *Culex pipiens* is a prototype insect."

"Within a relatively short time it will be possible, on the basis of these prototype experiments, to induce semi-sterility in other insects. For instance, in the American boll-weevil which I mentioned earlier. And from there it is only one step further before we start dealing with other parasites. Similar methods could be applied to rat control in areas where they are endemic, though the costs would be somewhat higher."

But for the time being Professor Laven lacks the necessary funds to "transfer" from gnats and beetles to mammals. "Even though," he thinks, "the cost of research and later application of this method would only be a fraction of what is spent annually on chemical controls."

Creatures can become immune to all chemical and biological extermination methods thus nullifying all efforts towards control. "But — I must emphasise this once again — there is no cure for genetic methods," stresses Professor Laven. (DIE ZEIT, 23 May 1969)



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## ■ THE ECONOMY

**Karl Schiller and revaluation**

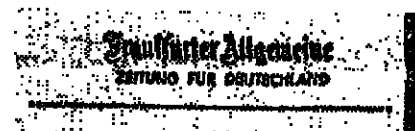
BY PROFESSOR ARMIN GUTOWSKI OF GIESSEN UNIVERSITY

No doubt exists now that the Minister of Economic Affairs, Professor Karl Schiller, wanted to revalue the Mark on 9 May. Revaluation — a modest rate of 6.25 per cent — was to have prevented the economy from boiling over and prices from taking an uncomfortable jump.

What the Bundesbank and economists had been predicting since last autumn was achieved by the planners of the medium-term development programme only when the March figures appeared. "Moderate growth" threatened to become a reckless boom the unpleasant repercussions of which the consumers would have felt before the Bundestag elections next autumn.

Great numbers of well-informed economists had reckoned with a revaluation, when the Minister of Economic Affairs finally came to an agreement with the Bundesbank. When it was announced that the Mark would not be revalued after all, about one hundred economists expressed their dissatisfaction and disappointment in an open letter to the Federal Chancellor, Kurt Georg Kiesinger.

Many of these critics would probably not object, however, if this compromise with the Minister of Economic Affairs were converted into a pursuance of the



economic policy of recent months. For, Professor Karl Schiller found his way to favouring a revaluation only a few weeks ago, when many feared that he would never see the exigency of this move, clinging rather to his forecasts than to the increasingly obvious facts of the case.

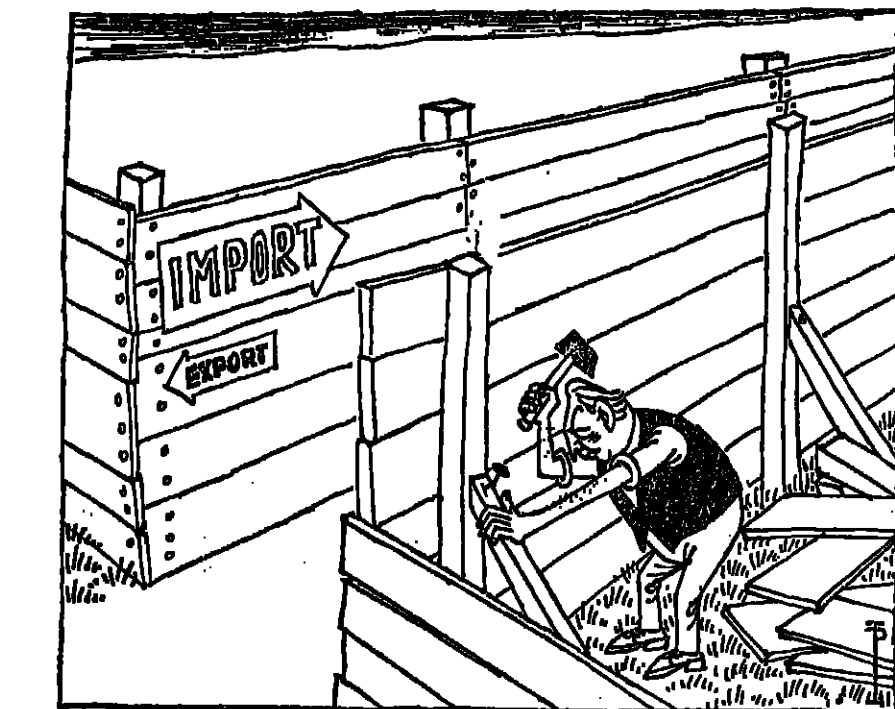
That Karl Schiller did eventually recognise the obvious makes him something of a one-eyed navigator among a boatload of blind people representing this country's political leadership.

How could the economy become overheated so quickly?

1. First came the contingency budgets and reawakened optimism in industry. The first positive results of this policy were attributed to the new, decision-making Minister of Economic Affairs.

When the third budget of this kind came up for discussion, the first sceptics raised their voices. Even those who did not subscribe to the view that Keynes' theory is insupportable began to fear that Karl Schiller was too deeply wrapped up in it. The third economic programme disappeared into a drawer.

2. Many saw in Professor Schiller the originator of Concerted Action, the man who succeeded in turning soloists, accustomed to working on their own, into members of a harmonious orchestra. On this level too, however, it was feared that the trade unions, muted rather in this ensemble in the interests of growth and prosperity, would just then come out strongly in favour of wage increases when



Not a question of controls, only a temporary arrangement, old boy!

(Cartoon: Peter Leger / Süddeutsche Zeitung)

the economy was coming dangerously close to the bubbling-over point, following stocking from the "asymmetrical profits" of industry.

Karl Schiller's concern for short-term semi-growth rates that could be realised triumphed over the growing danger that the avowed "social symmetry" might stimulate rather than curb the economy, triggering a new price-wage spiral.

3. The convening of a major economic conference indicated the ambition of the conductor of Concerted Action to place a fastidious international orchestra under his baton. This venture ended in failure.

France refused to devaluate. The Federal Republic gave birth to an economic bastard in the form of legislation introduced to stimulate imports and curb exports. These laws, and to an even greater extent decrees issued by the French government, shook the dust off

Minister of Economic Affairs Karl Schiller does not expect the real danger of a massive jump in prices to occur until next autumn or winter. In an interview with *Die Zeit*, Professor Schiller said that owing to high productivity and the effects of the tax measures introduced by the government last November to promote imports and stem the flow of exports prices increases this summer can be kept within reasonable limits.

The danger of inflation will become acute, however, if the slight price increases resulting from the present rise in demand is accelerated by the mounting pressure of production costs next autumn, the Minister added. He said he does not wish to appear as a herald of misfortune, however, with regard to developments next autumn.

If the ever-increasing gap between standard and actual wages is not checked, the pressure of costs next autumn following wage concessions will be great.

interventionist instruments that would be best forgotten.

Those who hoped that the Mark would be revalued, once the flow of speculative investment had ebbed, should have realised last January that they had misjudged the situation. After a little time, it was clear that the new instruments used to improve the balance of trade were too weak and had little impact. The export growth rate was as great as ever. Capital market interest rates could not be maintained.

It was to be expected that the average tolerable price increase forecast for 1969, despite the rise in Bank Rate, would be surpassed. Compensatory capital exports tottered on the weak legs of a temporary interest differential.

Hopes of direct investments abroad were harboured mainly by the mechanics of a better balance of payments — on

**No substantial price increases until autumn!**

New wage agreements will then be negotiated.

Professor Schiller said that the trade unions can hardly be blamed for endeavouring to assimilate as far as possible the wage-drift gap into their next round of wage talks.

The Minister categorically rejected interventionist measures as a solution to the pending conflict. Since March, he has been gathering convincing evidence from statistics that the measures taken by the government to improve the balance of trade are not strong enough.

As regards revaluation, Karl Schiller said that what really caused him to revise his former opinions and favour revaluation was General de Gaulle's resignation. He said he hoped to avoid the pressure

paper. For, why should industry set up production plant abroad when home production and exports, given the existing parities, promised greater profits?

Little blame should be heaped, those who in recent months have been discussing a possible revaluation. Revaluation was in the air. After all, the Minister of Economic Affairs had wanted it.

Undoubtedly, Karl Schiller, along with all advocates of revaluation, would have preferred to avoid the amateurish campaign that was bound to attract money. But he was prepared to allow allowance for the losses caused by the wave of speculation to prevent damage to the purchasing power of the Mark.

At first, the decision not to revalue might have been regarded as a move to discourage further speculation. The pronouncements of the Chancellor, however, who rejected the reasoning of those who seldom agree — cautious Bundesbank president Blessing and enterprising Karl Schiller — left no doubt that hopes of subsequent, surprise revaluation would prove deceptive.

Karl Schiller was therefore given an alibi. He did not pass the Jack this card, literally torn from his hands! That his little desire to see it again and that he was more than willing to allow the Chancellor to chair the cabinet meeting that followed, is understandable, to say the least.

The Minister of Economic Affairs declared that he intends to defend the market enterprise. Stability is not to be sacrificed, and directive measures are to be avoided.

Karl Schiller did not promise success. Under the circumstances, neither he nor anyone else would have been in a position to fulfill such a promise.

The Professor, but unfortunately for the economy, has nimbly evaded the hurdle. If his patent recipe of Concerted Action in the event of full employment and overemployment ceases to function he will place the responsibility for an economic trend that got out of control on the door of his political rivals. That the Ministry of Economic Affairs had

Continued on page 11

building up on the Mark with a relatively low devaluation rate of 6.25 per cent by the following weeks then he expected other countries to follow suit in the opposite direction.

The Minister said, however, that on this occasion political pressure was not exercised from abroad, after foreign governments had experienced last November the political forces that such pressure can arouse in the Federal Republic.

Professor Schiller said that he had failed to persuade the Cabinet to increase the four per cent tax introduced under the new laws to balance trade. "I assumed this was not possible because of familiar opposition from industry," he added.

Otherwise, the Minister of Economic Affairs said he was very pleased with the public discussion of this question. Not only did the trade unions and many exporters agree with him in this matter, but also large sections of industry.

(Frankfurter Rundschau, 23 May 1969)

## ■ COMMERCE AND INDUSTRY

**Business in textiles increases by leaps and bounds at Frankfurt's Interstoff**

Activity is booming in the textile industry. Even admitting that this sector felt the brunt of the economic recession more severely than others, developments in recent months indicate that the normal trend that set in soon after the recession has now reached boom proportions.

Despite great pressure on the labour market, production is still climbing at a steady rate. Although good growth rates were recorded last year, more and more stimulants have been taking effect since January.

Besides fashion-motivated impulses, a belated pride of expansion is now boosting production figures in the clothing industry, especially in the retail sector. The textile industry is still profiting from rapid reduction of stocks that accumulated during the slump.

The volume of orders was nineteen per cent greater in the first quarter of this year. Production climbed fourteen per cent and sales went up by eleven per cent. Full employment seems assured, not

Continued from page 10  
different story to tell in November 1968 will be of no interest to anyone.

Even at this stage all hope of a solution need not be abandoned. Other countries may find their way after all to unilateral devaluation.

Future developments will depend largely on whether immediate steps — demanded in the open letter to Chancellor Kiesinger — are taken to create a monetary system "in which exchange rates can be specified, independent of group interests and tactical considerations before decisions."

If this had been done earlier, the entire revaluation debacle might have been avoided. The alternative measures taken by the government are certain to prepare the ground for another currency crisis.

The more home demand is dampened by putting revenue on ice, the heavier will be the increase in exports. The simpler the equation the harder it is at times to explain. (Frankfurter Allgemeine Zeitung für Deutschland, 27 May 1969)



only in large companies with firm market positions. Terms of delivery must again be taken into consideration, as was obvious from the rush of orders at this year's Interstoff in Frankfurt.

Nevertheless, not all sections of the industry have profited from the boom, especially in the primary stages of production. Cotton production in the first three months increased by less than five per cent, as compared with a gain of ten per cent for the whole of last year. The cotton mills come last on the list of best growth rates.

The weavers too, with a production gain of only four per cent, are far below the average at this production level. The silk mills reported a surprising six per cent growth rate.

The woolen mills, reporting a growth rate of twenty per cent, are in the forefront of the sales charts along with the carpet-weavers (production up 23 per cent), curtain makers (up nineteen per cent) and the knitting sector (up fifteen per cent).

Rapidly changing fashions and new materials can be as short-lived as they are sometimes a basis of production for several years. Jersey fabrics are a typical example. Years ago, manufacturers were told that after a sudden boom the market would reach saturation point. Today, even following extensive expansion of facilities, demand is as keen as ever.

One other lesson learned from Interstoff was that price increases, despite an excellent market, are not generally accepted, even when spokesmen of large companies emphasise that increases in production costs and the need to step up investments will force prices up anyway, if this country's textile industry is to hold its place as one of the most modern in the world.

Since the middle of last year, much textile raw material has gone up in price, and is to become even more expensive in the months ahead, according to the experts. The round of wage talks that came to an end recently foresees an increase of

seven per cent in standard wages, as well as a forty-hour week from 1 April 1970.

Only enterprises marketing a new line of products can absorb this jump in production costs. The price index in the textile industry topped 101.9 points at the end of March, compared to 100 in 1962. This was only two points higher than last year's figure.

Strong foreign competition regulated prices. This country's textile market is regarded as one of the most keenly contested markets in the world.

Industry has no choice therefore but to adjust to the prices of foreign competitors on all markets. Manufacturers must do this, even when they are handicapped from the point of view of competition.

In many sectors of the industry distortions of the rules governing competition and the resultant pressure of imports are becoming critical. In the first three months of this year textile imports, excluding raw material, shot up 35 per cent to 2,000 million Marks.

The leading items were finished products, especially clothing, imports of which climbed 55 per cent to 825 million Marks. Measures taken last November by the government to improve the balance of trade triggered a strong flow of imports, without dampening exports, however.

Despite the four per cent tax on exports, foreign sales increased by 23 per cent to 1,480 million Marks. The foreign trade deficit in the textile sector increased by 85 per cent in the first quarter, totalling 522 Marks.

Minister of Economic Affairs Karl Schiller once said that this country's textile industry is above all flexible. That

**Social significance of slippers analysed by manufacturers**

House-shoes or slippers have often been mentioned in one breath with television in this country. This has impaired their popularity less than had been feared at one time.

An opinion survey has now supplied convincing proof of this popularity. Eighty per cent of the sample said they enjoy nothing better than slipping into comfortable house-shoes after the day's work.

The twenty per cent who do not change into slippers are not decidedly anti-slipper. About fifty per cent occasionally wear house-shoes. Only ten per cent adamantly refuse to wear slippers, perhaps associating them with the *Pantoffelheld* or the henpecked husband.

About 71 per cent said that they like slippers because they are comfortable. About forty per cent said that manufacturers should ensure that slippers are warm, and 23 per cent wanted them to be light.

Demand for felt slippers is not as strong as it used to be, with or without tin buckles. There is no sign, however, that such slippers are going off the market.

Not cleanliness but comfort therefore is the prime concern of the majority of people who wear house-shoes. Comfort

the industry has had to be alert and nimble in cultivating its foreign trade is due in large part to government policy.

Despite all the obstacles placed in its way, however, the textile industry, thanks to a courageous investment policy giving unparalleled production gains, has consolidated its position. Other great incentives came from extensive outlay on research and market development.

Of one thing there is no doubt — companies who have still reason to lament in this period of expansion, when even the textile industry can make decent profits, will be closing their doors very soon. (DIE WELT, 23 May 1969)

**Frankfurt's Interstoff best fair ever!**

The best Interstoff to date, according to the 500 exhibitors who took part, has come to an end in Frankfurt. A record number of buyers from all parts of the world attended.

The number of buyers present at this 21st Interstoff was estimated at 15,000, ten per cent more than at the same event in May of last year. A noticeable drop in the number of home buyers present was noted, however. The number of foreign customers increased by one third.

A survey showed that business has improved between home suppliers and foreign customers.

Judging by the present trend, the brisk market for textiles will continue at least until the middle of next year. An exceptional volume of orders for samples was placed.

Generally speaking, buyers showed greater interest in medium price brackets. It was emphasised that whereas no price increases were noticed in standard products, prices did rise in the case of decidedly fashionable exhibits.

(Hannoversche Presse, 28 May 1969)

alone, however, does not seem to suffice. Slippers are to be given more appeal.

The young generation is partial to leisure-time shoes. Manufacturers intended to cater more imaginatively for this trend by developing new kinds of shoes and improving advertisements.

The present rather stuffy living-room image of the slipper must be improved. The first new catch-word to appear was "home shoes." The new slipper look is also up to date and sexy.

Manufacturers of house-shoes regard themselves as stepchildren of the shoe industry. Whereas the makers of outdoor shoes are creating more and more "shoe generations," only time can help the slipper industry.

Romika, the largest manufacturer in this country, leads the field with a sales increase last year of 4.5 per cent. Chairman of the association is Rudolf Müller.

"Modern therapy often prescribes that the patient should be shocked. Consumers are to be shocked with implish and daring home shoes," said Müller.

Slipper manufacturers have learned to their regret, however, that it is not easy to eradicate old customs. The new home shoe is reportedly not selling very well.

(DIE ZEIT, 30 May 1969)

April 1969



## RESEARCH

## Plasma stability investigated at Garching Institute

**Industriekurier**  
 DEUTSCHE WIRTSCHAFTSZEITUNG

To trigger off controlled thermonuclear fusion deuterium plasma needs not only to be hot enough, it must also remain for a sufficiently long time within magnetic fields that prevent movement vertical to the lines of the field.

Linear devices have the disadvantage that the plasma can flow along the lines and out of the field at great thermic speed. Consequently a great deal of laboratory work is devoted to attempts to contain the plasma in ring-shaped, toroidal fields.

The flexure of the lines of the magnetic field causes fresh problems. The plasma is not stable. It is driven at right angles to the field lines against the wall of the torus.

Complicated additional fields ought in theory to restabilize the plasma but in experiments so far made known, Britain's Zeta, Russia's Tokamak and the Stellarator at Princeton, New Jersey, particle losses have occurred for which no explanation has so far been forthcoming.

The losses have been so great that unless some way of forestalling them can be designed toroidal structures are out of the question for controlled thermonu-

clear fusion. It is not even clear whether the losses are due to a disturbance in the balance or the result of instability that is not yet appreciated.

Similar experiments have been conducted for several years at the plasma Physics Institute in Garching, near Munich. In order to eliminate the difficulties connected with the generation and heating of a high-temperature plasma barium plasma was first employed.

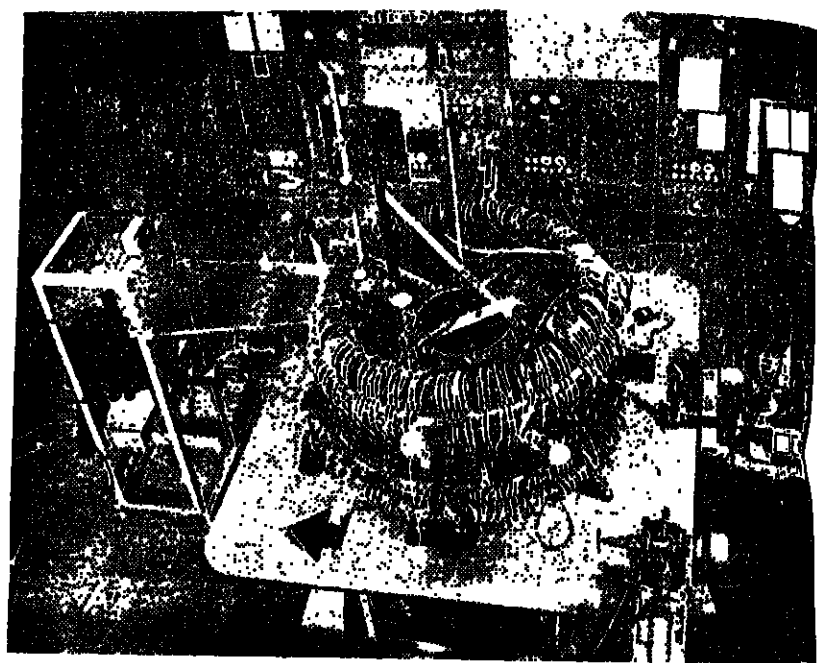
Barium plasma is easy to generate near to thermic stability and despite its low temperature, only 2,000 degrees centigrade, it can be used to simulate many properties of high-temperature plasma.

Under carefully chosen experimental conditions loss rates have been measured in a stationary condition that, allowing for a certain tolerance, correspond exactly to rates of loss calculated numerically according to classical ideas.

The particle losses in question are one or two times less than would be expected from other toroidal devices. Similar results have been achieved in another toroidal device constructed along different lines.

Clarity has not yet been gained as to the reasons for this discrepancy but the latest experimental results give cause for hope that the problems relating to toroidal containment may one day be understood and solved.

(Industriekurier, 28 May 1969)



'Wendelstein II' at the Garching experimental station

(Photo: Institut für Plasma Physik G)

## Aerospace symposium held at Hanover conference

While American astronauts carry out the successive stages of the Apollo project with staggering precision space research in this country is the subject of the greatest interest in the United States.

At a symposium held in Hanover by the Federal Republic Aerospace Research Association details were recently released of experimental propulsion units designed particularly with longer journeys into space in mind.

Research institutes and industrial research facilities in this country have proved extraordinarily successful in developing means of converting solar energy into propulsive force for satellites and space probes.

The powerful Saturn rocket that took the latest three US astronauts, their command capsule and the lunar module into space is powered by liquid chemical fuel. Liquid and solid chemical fuels are the rule at present and in the case of booster rockets designed to launch human or instrument payloads into orbit are likely to remain so for the foreseeable future.

Once in space, however, satellites and space ships continue to need sources of energy for every change in course or trajectory. Apollo 10 and all other space probes have taken fuel with them, but the more fuel they need, the less payload they can carry.

### Electrical energy conversion

For more than a decade scientists in the United States, this country and elsewhere in Europe have been engaged in research into propulsion systems based on the conversion of electrical energy. These ion and plasma propulsion systems were the subject of the Hanover symposium.

At scientific institutes in Brunswick, Giessen and Stuttgart research has made swift progress, particularly over the last three years. Work has reached the stage at which industrial exploitation can begin and a number of concerns have already done so.

These new electric motors work on a relatively straightforward principle. Ions, electrically charged particles, or plasma, a gas mixture, are generated and emitted by

the engines at as high a speed as possible. Solar energy is to power the proton Large solar cells (one project provides more than forty square yards of surface) will charge the batteries.

According to present plans the ion solar-electric power unit will be launched in the nose of a chemical booster rocket from Western Test Range in 1973, by physicists Arlt, Au and Baumgardt of Brunswick Institute of Jet Propulsion reckon that the first electric power unit will be used in commercial telecommunications satellites.

Solar battery power could propel communications satellites from the

**Hannoversche Allgemeine**  
 ZEITUNG

orbit into which they are sent by chemical rockets into the stationary orbit required.

Research in this country undoubtedly leads the field in Western Europe. That is every reason for preparing the units, so far tested under laboratory conditions only, for space flight as pressing ahead with trials in space before the German lead is lost.

Shortly, but far from sweetly, the gratifying failure of the third stage of the Eldo Europa 1 rocket was dealt with at the symposium. The launcher rocket, jointly developed by a number of Western European countries, failed last autumn to put the first experimental satellite into orbit because the third stage, made in this country, cut out.

In Hanover the cause of the failure was stated to be a defect in the pressure supply for the fuel containers. The defect in pressure presumably occurred when the third stage separated from the second.

Reasons were not given. Investigations, it was noted, were still in progress and Eldo, the European Launcher Development Organisation, must first be informed. In answer to persistent questions it was stated that the third stage of the new Europa rocket would definitely function.

(Hannoversche Allgemeine, 23 May 1969)

## MOTORING

## Psychologists take a look at car drivers' motivations

**Münchener Merkur**

Münchener Zeitung  
 für Politik, Wirtschaft, Kultur und Sport

His sports car revving impatiently, a young man crawls at snail's pace behind the tram. Suddenly there is room to overtake on the inside. The expression on his face hardens and his tyres squeal as the little car shoots past.

Why does he look like a sprinter on the starting-blocks when all he has to do is put his foot down on the accelerator? "He identifies himself with his car, of course," traffic psychologists say.

"But that is not the danger," they add. "There is not anything we can even do about it." Road-users who are motivated solely by reason are an impossibility. "It is far more important for traffic planners to adapt to 'human' road-users. There is still a great deal they could do."

The psychological and medical department of the Technical Supervision Association, the body that carries out compulsory two-year tests on motor vehicles, deals with problems such as this.

"We not only test people who have failed the driving test for the third time," says Professor Benedikt von Hebenstreit, head of the department in Munich. "We try to find answers to questions of general road safety."

People's behaviour in road traffic is in any case much better than, say, fifteen years ago. "Even people who took their driving tests before 1945 had first to accustom themselves to changing situations in traffic."

Road safety instructors in schools reckon that we are well on the way to doing so when schoolchildren repeatedly lament the fact that no one seems prepared to tell them anything about road signs. People have become driving-conscious.

"We have driven our way to experience," says Professor von Hebenstreit, adding with a grin that "It is true nonetheless that women drive worse than men." Yet he is able to provide a serious explanation for the phenomenon.

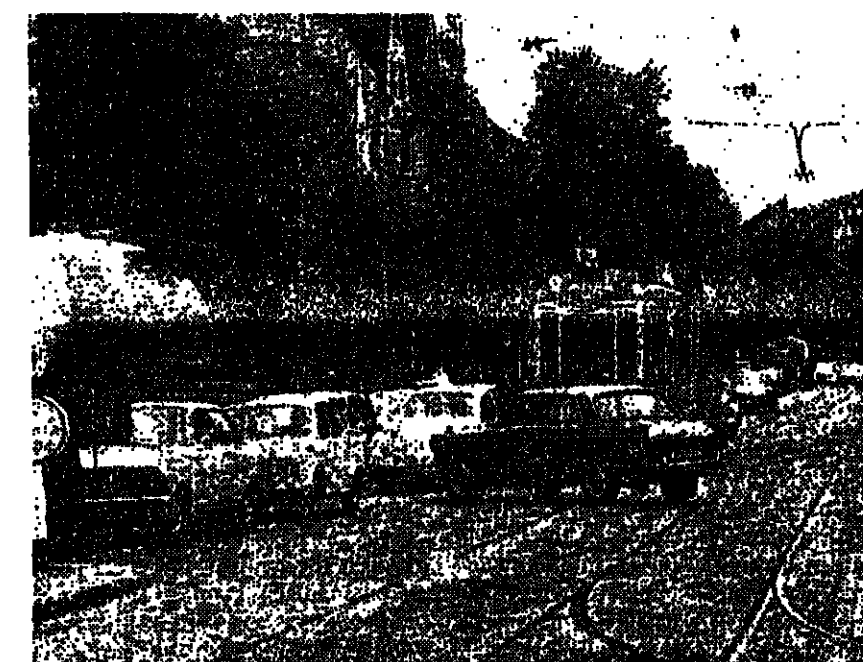
As a rule women have held driving licences for a shorter period than their menfolk. In many cases they also lack practice, often only having an opportunity to try their hand at the wheel when the husband has had one over the eight at a party.

So the "human" prerequisites for tolerable road traffic are already in existence. Even though every holder of a brand-new driving licence is more accident-prone than the old hands for the few years he needs to develop a driver's sixth sense.

Traffic planners are now taking the reactions of normal motorists into account. In the early fifties they dealt mainly with technical problems such as the camber on bends, the availability of parking facilities and the mechanism of traffic lights.

Later on they were to pay more attention to costs. Nowadays, however, roads and motor vehicles are technically so perfect that further progress can only be achieved by taking human nature and behaviour into account too.

"We know that road-users work off



Psychologists can read much into traffic jams such as this

(Photo: G. H. Lauck)

their aggression at the wheel," Professor von Hebenstreit notes. "It is only natural." In traffic as in other spheres of life Man's natural instinct is to fight.

This fighting instinct manifests itself when someone flashes the man in front to force him to give way, when a motorist sounds his horn or drives dangerously close to another car when overtaking, when he tries to impress by making a flying start and compensates an inferiority complex by having an out-of-the-ordinary car — a nippy little roadster, for instance.

Since there is a psychological explanation for much of motorists' behaviour traffic planners today stand a very real

chance of using psychological stratagems to manipulate the motorist for his own good.

Professor von Hebenstreit gave a Munich example. "A large number of side roads formed T-junctions with a straight road. All of them were on the right, the near side for oncoming traffic, and every one had right of way over traffic on the straight road. Accidents continually occurred because drivers failed to pay attention to traffic from the right."

"Everyone cursed the inconsiderate motorists on the straight road until it was realised that the application of right of way may have been legally correct but it was certainly impractical. To make mat-

ters worse, there were blue arrow signs (for 'straight on, no right turn') at each corner and they virtually lured traffic on into the danger zones at each corner." The accident rate fell by three quarters as soon as the 'drive on' signs were taken down.

Autobahns, for instance, are technically more convenient and less expensive if they are built in a straight line. "But," von Hebenstreit adds, "it was soon realised that this was dangerous. Straight, monotonous motorways lead to autobahn psychosis."

"In the process attentiveness and ability to react decline considerably. Curves are now incorporated arbitrarily in order to prevent psychoses of this kind. Or gradients that in the past would have been levelled out are left as they are in order to induce drivers at least to change gear once in a while."

In Munich halt signs are increasingly being accompanied by a thick white line across the road. "Drivers are far more ready to come to a dead stop."

"In winter, of course," Professor von Hebenstreit adds, "the snow gets in the way, but even in Switzerland road markings rather than signs, including directional markings, have proved successful."

Lane markings, for instance, tend to speed up traffic, whereas speed can be reduced by painting lines from one side of the road to the other.

"Another most effective method is to hammer in a row of metal studs across the road. They make motorists slow down rapidly. The only snag is that in wet weather they make brakes less effective."

"At all events," Professor von Hebenstreit concludes, "the roads traffic use must be adapted to fit the people who drive along them. Legal and technical considerations must not be the only factors. The human psyche must also be taken into account."

(Münchener Merkur, 27 May 1969)

## Measures against the toxic fumes discharged by automobiles in built-up areas

Not long ago an autobahn accident hit the headlines. A woman driver was dragged out of her car at the last minute. Any longer and she would have died of toxic exhaust fumes that had entered the inside of the car via a blockage in the heating system.

Another incident, in America this time, is also thought-provoking. At Daytona Beach one driver after another was dragged out of the cars of a highly-rated manufacturer the victim of a blackout. Virtually blinded by exhaust fumes, they had to throw in the towel.

Little noticed by public opinion the Federal Republic is the first country in Europe to crack down on exhaust fumes.

The first new regulation came into force at the beginning of this year. Newly registered vehicles may not have more than a certain amount of unburnt hydrocarbons in their crankshaft casings. The specified minimums can be maintained by means of better combustion.

What is more, from the beginning of June regulations have specified a mandatory limit to exhaust fumes in neutral and starting this autumn now cars will have to conform to certain standards at a number of stages.

Health Minister Käthe Strobel and Transport Minister Georg Leber have joined forces to help drive toxic gases off the roads. They are also responsible for a side-effect that does not have anything to do with their respective government departments. The new regulations have triggered off further development of the internal combustion engine, which was considered to be more or less perfect.

The carburettor, in particular, must now become a precision instrument. Improved combustion and better utilisation

of fuel is the only way to reduce the amount of toxic gases in exhaust fumes. The result will be a drop in fuel consumption which, the pundits say, will in the long run offset the slightly higher price that will have to be paid for a new car.

Protracted research work conducted by the Federal Health Office in conjunction with the Federal Materials Research Institute were necessary before the regulations could be put into force.

Extensive measurements were made in busy streets, particularly in Steglitz, a suburb of West Berlin, to determine the amount of air pollution. During the rush hour the concentration of certain substances compared none too well with the maximums recorded in other European and North American cities.

At the behest of Health Minister Käthe Strobel the Federal Health Office is conducting biological and medical research into the chronic effects of air pollution. The conclusions that are drawn from this work will undoubtedly provide greater protection against the hazards of atmospheric pollution than in the past.

The danger and nuisance value of car exhausts in other countries is indicated by a suit filed by Los Angeles County against the automobile industry. Los Angeles is demanding 700 million dollars in damages for the blanket of smog that covers the city.

Local authorities in this country have yet to hit on this idea, but the suit has given rise to thought. America's clean air package has not been without effect on the motor industry here.

(RHEIN-NECKAR-ZEITUNG, 17 May 1969)

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## ARCHAEOLOGY

## The origins of the Germanic tribes

THE FUSION OF TWO CULTURAL STREAMS AND TWO LANGUAGES

Few peoples have in time and place been judged so variously as the Germans. The range stretches from basic disdain for the destructive, warlike barbarians to the respect for noble and pure heroes. The latter view was trumpeted abroad loudly in the Thousand Year Reich.

Research into the culture of the Germans which was so inert after the last war and went underground so to speak had its most glittering period during the era of the Third Reich. Research workers collected much in those days, along with researchers working in fields of pre-history abroad, particularly in Denmark. The information collected is beginning currently to give a picture of what and who the Germans essentially were, a picture that in many ways goes beyond the sources available to the usual historian.

Who and what the Germans were essentially, it must be admitted, has not yet been defined definitively. One thing is certain, however: they were not a "German race". They did, however, participate in the birth of a new language. Some time in the early Iron Age this language was formed from a northern language in central Europe by means of "German sound-shifting", that is a speech structure that among other things by displacement of accent on all multi-syllable words to the first syllable. The new language was "Germanic".

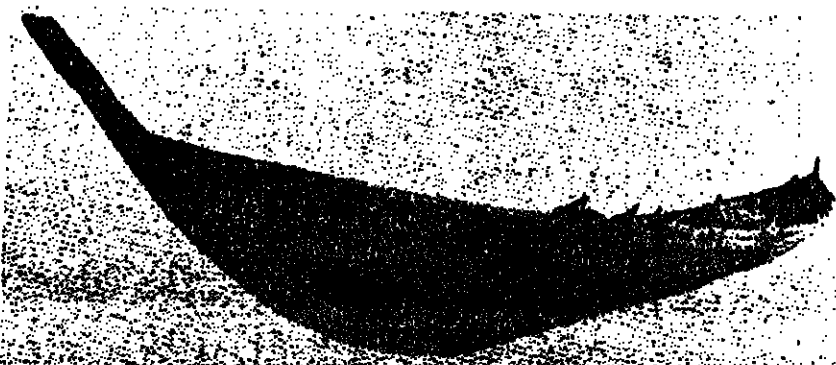
This "Germanic" language was used by tribes inhabiting the northern parts of central Europe, who are usually defined today as "German". When and how the Germans emerged is still difficult to say. There is a rare and invaluable witness to the beginnings of this tribe. It is a helmet found in an excavation in Austria bearing an inscription in very early "Germanic" with the first intimations of the sound-shifting. The dating of this find has been disputed but most authorities are of the opinion that it comes from the fifth century before Christ in which "germanisation" in Europe began.

By analysing place names, from inferences on the spread of Germanic language



A Suevi pleading for mercy in a work of Roman origin from the first century A.D.

ages and from archaeological finds concerning cultural relationships it can be surmised that the first Germans inhabited the lower part of Jutland, the area around the Elbe and the North Sea coast. Until the beginnings of the Christian era the



The famous boat made from oak from Nydam built in the fourth century A.D. (Photos: taken from W. Schultz's book 'Altgermanische Kultur in Wort und Bild' plates 34 and 45)

extent of the German tribes went no further than this. Writers in the ancient world did indeed speak of "Germans" and what later became Germany but these references were in the main vague and partly — for instance Caesar — coloured with political motivations. Archaeological finds suggest that the settlers of Middle Germany, as well as of southern Germany, and in what is now northern Germany, were perhaps more Celtic in orientation than Germanic.

## Prelude to wanderings

The picture is blurred by the fact that at the beginning of the Christian era an energetic expansion of the Germanic tribes from the "Celtic lands" took place, extending to the Rhine and over the Rhine. This was probably a prelude to later tribal wanderings. Caesar met Ariovistus, the leader of an invading tribe coming from the lower Elbe, but who originally came from Holstein. Isolated finds (such as women's graves in Neuwied by the Rhine) show the advance of the Germanic tribes into middle and west German lands among people, who were of non-German origin. If the Crusel, the tribe that defeated Varus and his legions, were included in these tribes is a still a question under dispute.

What is sure is that the beginnings of the Germanic tribes, by virtue of the fact that they adopted a new language from another people with differing religious and cultural roots had nothing to do with race as such. The people who adopted the language had nothing to do with race. Ancient writers did comment on certain physical features of the Germanic tribes which seemed common — blond, blue-eyed, tall and well-built — but these facts were not "scientific" as we understand the word today. They were rather the results of comments made by subjective observation. According to the Romans these people were different from the "normal" run of peoples and tribes the legions had encountered elsewhere. Later research has not been able to deduce from skeletal remains found that there was a "Germanic tribe" or "Nordic tribe" living in the territory that is today Germany.

It would not have been possible. The people living in the territory which was the centre of the Germanic tribes — Jutland, northern Germany, north-west Germany and the coastal regions — which have certain affinities culturally, as regards religion and language, were cer-

tainly as regards race not from the same racial origins. This people originated through the commingling of at least two cultural streams, coming racially from the Early Stone Age period and almost a thousand years before the Germanic tribe had its beginnings.

These two cultures — one from the west whose economy was based on agriculture and who built huge barrows and the other coming from the south-west, a hunting people who had developed the hand axe culture — these cultures seem to have mixed and settled to develop the culture of the Germanic tribes. There is very reason to believe that these two cultural streams mixed and formed the people we call Germanic. As these two tribes commingled more freely together physical developments took place to give rise to the idea of a "Germanic people", but not a "Germanic race".

In the centre of the development of this germanisation certain changes took place. For thousands of years these people lived on the perimeter of the highly developed technical and agricultural societies that had evolved around the shores of the Mediterranean. These societies had developed the uses of metal — firstly copper, then bronze.

The old cultures of the Mediterranean soon penetrated to the north. And the ores for these metals were discovered in these areas. Bronze had to be imported in the north, paid for by local wares and products, not only with amber that came from the Jutland coasts but also with slaves, wool and furs. These payments out of the area were a heavy burden on the economy. Between 600 and 500 B.C. the techniques of working iron were introduced into the area where the Germanic tribes lived, which made it possible for these people to manufacture their own bronze utensils using their own iron, mined in their own lands.

## First foundry

By good luck a few years ago there was discovered in Schleswig-Holstein the settlement where the first foundry and smithy was introduced into the north from the south. It was at Jevensdorf not far from Rendsburg not far from the Kiel Canal.

The sudden development of a metal-based economic society had far-reaching effects on social evolution. Evidences of

economic revival are common. Land that had apparently remained fallow was worked and made productive. The became richer and the people more fluent which can be seen by the magnificence of the graves they had constructed for themselves. At the beginning of Iron Age the burial grounds were more crude in construction, but by the commencement of the Christian era there were many of complicated design.

It is unknown still if the economic revolution because of the development of a metal-based society and the emergence of a new language and culture inter-related. It is possible that the development of these two aspects at the same time were but a coincidence in history.

During the pre-Roman Iron Age Germanic tribes were already an agricultural people but with only a few specialised tools and a religion based on fertility. There is little evidence of Wotan and Thor were associated with peoples with gods that did battle in heavens. Religious belief was dominant during this period by a goddess served a congregation of priests who once a year carried her through the fields in fertility ceremonies so that she could bless the crops.

Human sacrifice was also offered to this goddess. On the moorlands and Jutland and north Germany a number of human remains have been found to be obviously the victims for these fertility rites. It is possible that priests themselves were the persons offered to the goddess. The bodies of the sacrificed to the earth goddess — named by Tacitus Nerthus — have been found in these moorlands found in deep grass lowered there by means of ropes made of willow twigs or twine.

## SONNTAGSBLATT

Later excavations have confirmed reports that Tacitus wrote concerning the cult of Nerthus dealing with ritual processions through the tilled lands and the sacrifice of the priests after the ceremony who had served the goddess. These have also confirmed later writings on the culture and civilisation of these Germanic tribes.

Yearly new discoveries are made which expand the material Tacitus wrote. A skull has been found near Kiel showing the kind of hair style the Suevi employed. Also vessels for storing corn have been found as well as underground passages connecting the houses these Germanic tribes built. All these discoveries confirm what Tacitus wrote.

As early as the time when Tacitus lived the Germanic tribes had begun to develop a new culture and social structure. The contrast between the nobleman and the peasant had grown more noticeable. Wealth, power and influence of the nobility families had become more extensive. Success in battle gave to the nobles greater hold over the rest of the tribe. Fighting units of considerable power were developed.

Roman legions were not the only means by which Roman culture, art and civilisation were handed on to the Germans.

Continued on page 15

## SPORT

## Bayern Munich's swift road to the top

How do Bayern Munich manage it? Promoted to the Federal football league in 1965, they were cupwinners in 1966, European Cupwinners in 1967, League Cupwinners again in 1967 and are now the 1969 champions.

The answer is easier than might seem to be the case. The club saw the shape of things to come in good time.

On gaining promotion to the Federal league (the FA had not seen fit to make Bayern a member of the league when it was first started in 1963) the Munich club went all out to be professional.

In contrast to most other clubs there was no talk at board meetings of what to do first and how to go about it. Chairman Wilhelm Neudecker took matters firmly under control and his tactics have proved so adept and successful that the opposition have never had the opportunity to go on to the attack.

Neudecker also made a sound decision in appointing Robert Schwan, newly-elected chairman of the match committee, technical director. Schwan may earn as much as some club trainers do but the investment has paid dividends.

Players under professional contract to Bayern Munich do not have to slalom their way through a clubland jungle to register complaints and make requests or

demand. A complaint to the trainer goes straight to the director and then to the chairman.

Yet in 1962, when Wilhelm Neudecker took over after the sudden departure of Roland Endler, he was considered to be a makeshift and was not expected to last long at the top.

But Neudecker, a self-made man who has worked his way from being a regular soldier and an apprentice bricklayer to a trained bricklayer, master bricklayer, self-employed building contractor and millionaire, soon worked his way through the tough world of football.

Bayern now have 8,200 members. Neudecker wants at all costs to reach the

Climatic reasons for a long time were given as an explanation for the migration of these tribes from the north southwards. There was a indeed a climatic change in Europe at the end of the Bronze Age and the beginning of the Iron Age, that is about the beginning of the Christian era. This hypothesis is unacceptable because there are so many centuries between the climatic change and the beginning of the Germanic tribes' expansion.

This hypothesis does not take into account, for instance the developments that came about as a result of the introduction of the use of metals into tribal life and the new social structure as well as centralisation which came about as a consequence of economic improvements. There was also the attraction that Rome had for the tribes as a metropolis of immense wealth and the centre of a world empire. To the princes of the Germanic tribes the "Roman way of life" seemed so infinitely superior to anything they themselves had or could develop.

These were some of the many reasons that caused the great migration southwards and originated the picture of Europe as it later developed.

(DEUTSCHES ALLGEMEINES SONNTAGSBLATT, 1 June 1969)

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